



TWIN FALLS COUNTY HAZARD MITIGATION PLAN

2026



Executive Summary

The 2026 Twin Falls County Hazard Mitigation Plan (HMP) is an update of the 2020 Plan. To fulfill federal requirements, the update includes reevaluation of hazards within the jurisdictions and update mitigation strategies. The 2026 plan complies with federal Disaster Mitigation Act mitigation planning requirements.

The Twin Falls County Hazard Mitigation Planning Project was led by Jackie Frey, Coordinator, Twin Falls County Office of Emergency Management (OEM), who, under the direction of the Twin Falls County Commissioners, is responsible for implementing the mitigation actions recommended in this Plan.

The Twin Falls County Hazard Mitigation Planning Committee was comprised of members of the Twin Falls County Local Emergency Planning Committee (LEPC), emergency services, businesses, and local entities. The methods of community involvement included: a in person survey, an electronic based community survey, an invitation to attend the local elected officials' briefings, an open forum to review projects and the public survey, and community review/input of the draft plan. Community participation was excellent. Surrounding counties, schools, and local businesses were invited to participate in the meetings, survey, and review of the plan. There was limited input by these groups.

While the focus of this Plan is on county-wide mitigation activities, it was developed through an integrated effort by representatives from many county jurisdictions. The following cities and taxation districts have also participated in the development of this Plan:

- City of Buhl
- City of Castleford
- City of Filer
- City of Hansen
- City of Hollister
- City of Kimberly
- City of Murtaugh
- City of Twin Falls
- Buhl Highway District
- Filer Highway District
- Murtaugh Highway District
- Twin Falls County
- Twin Falls Highway District
- Twin Falls County Pest Abatement District
- Twin Falls Canal Company
- Three Creek Rangeland Fire Protection Association, Inc.
- Saylor Creek Rangeland Fire Protection Association, Inc.

The update included reviewing and updating each hazard (occurrences, impacts), reviewing changes to the county and cities (growth, development), analyzing how climate impacts affect hazards, and assessing the impacts of each hazard on vulnerable populations within the county.

There were no significant changes to hazard risk or vulnerability within the county and participating jurisdictions. Changes in the county (growth, development, etc) were captured in the update as well as hazard events that had occurred over the past five years. Risk assessments were reevaluated and updated as needed based on the updated information.

There were no new changes to ordinances, codes, or laws that impacted hazards or mitigation activities over the past 5- years.



FEMA

June 30, 2026

Heidi Novich
Interim State Hazard Mitigation Officer
Idaho Office of Emergency Management
4040 W Guard St, Building 600
Boise, ID 83705

Re: Approval of the Twin Falls Hazard Mitigation Plan

Dear Heidi Novich:

In accordance with applicable¹ laws, regulations and policy, the Risk Analysis Branch of FEMA Region 10 Mitigation Division has approved the Twin Falls Hazard Mitigation Plan for the following jurisdictions:

Twin Falls County	City of Buhl	City of Castleford
City of Flier	City of Hansen	City of Hollister
City of Kimberly	City of Murtaugh	City of Twin Falls

Mitigation plans may include additional content to meet Element H: Additional State Requirements or content the local government included beyond applicable FEMA mitigation planning requirements. FEMA approval does not include the review or approval of content that exceeds these applicable FEMA mitigation planning requirements.

The approval period for this plan is from June 30, 2026, through June 29, 2031.

The jurisdictions' plan approval ensures the eligibility for project grants under FEMA's Hazard Mitigation Assistance programs. All requests for funding are evaluated individually according to

¹ Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and National Dam Safety Program Act, as amended; C.F.R. 44 § 201, Mitigation Planning; and Local Mitigation Planning Policy Guide (FP-206-21-0002).

Interim Officer Novich

June 30, 2026

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eligibility and other program requirements. Having an approved mitigation plan does not mean that mitigation grant funding will be awarded. Specific application and eligibility requirements can be found in each FEMA grant program's respective policies and annual Notice of Funding Opportunities, as applicable.

FEMA's approval is for a period of five years, effective the date FEMA received the adoption documentation. For this plan, documentation was received on June 30, 2026 and is considered approved as of then. Prior to June 29, 2031, each jurisdiction must review, revise, and submit their plan to FEMA for approval to maintain eligibility for grant funding. The enclosed plan review tool provides opportunities to incorporate into future updates.

Sincerely,

Andrew Jones

Acting Risk Analysis Branch Chief

Mitigation Division

MB:AB

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: Twin Falls County

The Twin Falls County Board of Commissioners acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, Twin Falls County:

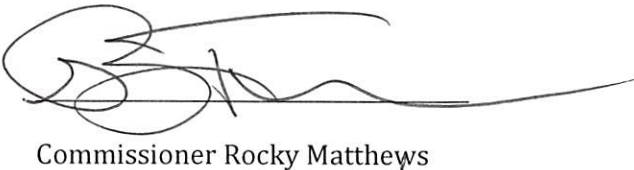
1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to implement mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate future plan maintenance and updates.

Approved by the Twin Falls County Board of Commissioners

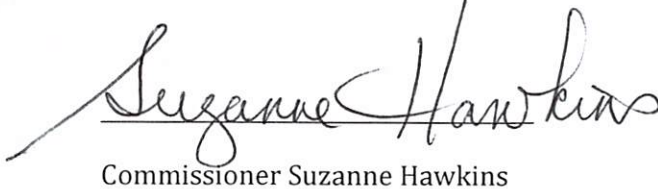
this 1st day of June, 2026.



Chairman Brent Reinke

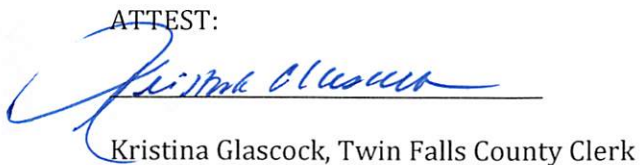


Commissioner Rocky Matthews



Commissioner Suzanne Hawkins

ATTEST:



Kristina Glascock, Twin Falls County Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Buhl

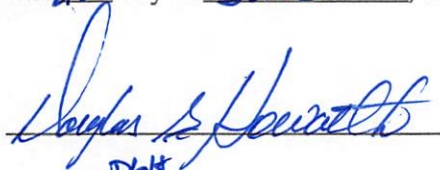
The City of Buhl acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Buhl:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

Approved by the governing body of the City of Buhl

this 22 day of June, 2026.



Mayor ^{DeH} David Howarth

David Howarth

ATTEST:



City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Murtaugh

The City of Murtaugh acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Murtaugh:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

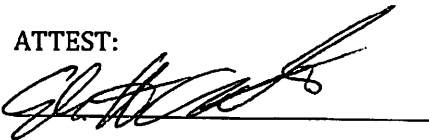
Approved by the governing body of the City of Murtaugh

this 9th day of June, 2026.

A handwritten signature in black ink, appearing to read 'Dee Hunsaker', written over a horizontal line.

Mayor Dee Hunsaker

ATTEST:

A handwritten signature in black ink, written over a horizontal line.

City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Hollister

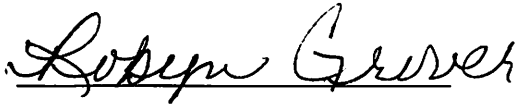
The City of Hollister acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Hollister:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

Approved by the governing body of the City of Hollister

this 1 day of June, 2026.



Mayor Robyn Grover

ATTEST:



City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Hansen

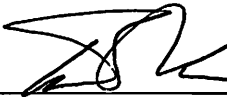
The City of Hansen acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Hansen:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

Approved by the governing body of the City of Hansen

this 8 day of June, 2026.



Mayor Todd Stimpson

ATTEST:


City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Filer

The City of Filer acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Filer:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

Approved by the governing body of the City of Filer

this 15th day of June, 2026.



Mayor Bob Templeman

ATTEST:



City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Castleford

The City of Castleford acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Castleford:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

Approved by the governing body of the City of Castleford

this 9 day of June, 2026.



Mayor Cliff Lockhart

ATTEST:



City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION
Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Kimberly

The City of Kimberly acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Kimberly:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

Approved by the governing body of the City of Kimberly

this 23 day of June, 2026.



Mayor Burk Davidson



ATTEST:

C. I. Knull

City Clerk

NOTICE OF ENDORSEMENT AND PARTICIPATION

Twin Falls County 2026 All-Hazard Mitigation Plan

Jurisdiction: City of Twin Falls

The City of Twin Falls acknowledges participation in the development of the Twin Falls County 2026 All-Hazard Mitigation Plan.

By this Notice, the City of Twin Falls:

1. Formally endorses and adopts the Twin Falls County 2026 All-Hazard Mitigation Plan.
2. Affirms its commitment to participate in the implementation of mitigation strategies as identified in the Plan.
3. Understands adoption is required to maintain eligibility for FEMA Hazard Mitigation Assistance (HMA) funding.
4. Agrees to coordinate with Twin Falls County in future plan maintenance updates.

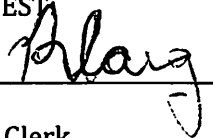
Approved by the governing body of the City of Twin Falls

this 29 day of June, 2026.



Mayor Jason Brown

ATTEST



City Clerk

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Attachment 2. Community Survey

Section 1. Planning Process

Introduction

Twin Falls County, Idaho, and the incorporated cities that lie within the county boundaries, are vulnerable to natural and non-natural hazards that have the potential to cause serious harm to the health, welfare, and security of its residents. The cost of response to, and recovery from, disaster events can be lessened when attention is turned to mitigating their impacts and effects before, they occur or re-occur.

This Plan seeks to identify the county's hazards, understand the vulnerabilities to those hazards, and craft solutions that, if implemented, will significantly reduce threats to life and property. With increased attention to managing natural hazards, communities can reduce the threats to citizens and, through proper land use and emergency planning, avoid creating new problems in the future. Many solutions can be implemented at minimal cost and social impact.

This is not an emergency response or management plan. The Plan can, however, be used to identify weaknesses and refocus emergency response planning. Enhanced emergency response planning is an important mitigation strategy. The focus of this Plan is to support better decision making directed toward avoidance of future risk, and to implement activities or projects that will eliminate or reduce current risks.

Plan Organization

This Hazard Mitigation Plan (HMP) is organized into the following sections:

- Section 1 – Planning Process. Provides a general overview of the process, scope, purpose, and goals of the plan.
- Section 2 – County Profile. Provides a general background of the county, including demographics, economics, cultural, and physiographic characteristics.
- Section 3 – Risk Assessment. Identifies the weather hazards and any additional hazards faced by the county.
- Sections 4 and 5 – Mitigation Goals, Objectives, Strategy, Actions, and Implementation. Identifies the mitigation goals and objectives of the county and the mitigation actions to reduce loss of life and property from hazards identified in the Risk Assessment.
- Section 6 – Plan Maintenance. Presents the county's commitment to updating the plan on a yearly and 5-year basis.

Hazard Mitigation and Hazards

Hazard mitigation is defined as cost-effective actions that have the effect of reducing, limiting, or preventing the vulnerability of people, culture, property, and the environment to potentially damaging, harmful, or costly hazards. Hazard mitigation measures that can be used to eliminate or minimize the risk to life, culture, and property fall into the following three categories:

- 1) Those that keep the hazard(s) away from people, property, and structures,
- 2) Those that keep people, property, or structures away from the hazard(s), and
- 3) Those that reduce the impact of the hazard(s) on victims (i.e., insurance).

Hazard mitigation measures must be practical, cost effective, and culturally, environmentally, and politically acceptable. Actions taken to limit the vulnerability of society to hazards must not, in themselves, be more costly than the anticipated damages.

Hazard mitigation planning is based on vulnerabilities, and its primary focus is on the point where capital investment and land use decisions are made. The placement of capital investments (whether for homes, roads, public utilities, pipelines, power plants, or public works) helps to determine, to a large extent, the nature and degree of a community's hazard vulnerability. Once a capital facility is in place, there is little opportunity to reduce hazard vulnerability through correction of errors in location or construction. It is for this reason that often the most effective mitigation tools are zoning and other ordinances that manage development in high vulnerability areas and building codes that ensure that new buildings are constructed to withstand the damaging forces of anticipated hazards.

Because disaster events are generally infrequent, the nature and magnitude of the threat is often ignored or poorly understood. Thus, the priority to implement mitigation measures is low and implementation is slowed. Mitigation success can be achieved, however, if accurate information is portrayed through complete hazard identification and impact studies, followed by effective mitigation management.

The following hazards were identified as directly impacting Twin Falls County:

Natural Hazards:

Severe Weather
Drought
Flooding
Dam/Canal Failure
Earthquake
Landslide/Mudslide
Wildfire

Non-Natural Hazards:

Structural Fire	Biological
Radiological Event	Cyber Security
Hazardous Material Event	Utility Disruption
Riot/Demonstration/Civil Disorder	
Terrorism	

Participating Jurisdictions

This AHMP covers all areas within Twin Falls County, Idaho, and the following jurisdictions will adopt the final plan:

- City of Buhl
- City of Castleford
- City of Filer
- City of Hansen
- City of Hollister
- City of Kimberly
- City of Murtaugh
- City of Twin Falls.

Plan Purpose

The purpose of this Plan is to identify local policies and actions that can be implemented over the long term to reduce risk and future losses from hazards to Twin Falls County. The Plan identifies the current needs and values of the community in order to develop a mitigation strategy specific to Twin Falls County.

Twin Falls County Hazard Mitigation Planning Committee

The Hazard Mitigation Planning Committee is comprised of representatives from the Twin Falls County Local Emergency Planning Committee (LEPC), Twin Falls County department heads, representatives from the transportation districts and the incorporated cities, representatives from the major utility providers, interested media, stakeholders (IOEM), and members of the public. Academia (CSI), local counties, and regional services (Southern Idaho Health) were invited to participate in the plan update.

The 2025 committee members are provided in Table 1.1. Stakeholders who participated in the plan update are presented in Table 1.2

Table 1.1. 2025 Participants

Representative	Agency	Position
Jackie Frey	Twin Falls County OEM	Emergency Services Coordinator
Brent Reinke	Twin Falls County	Commissioner
Jealsy Knutz	South Central Public Health	Planner
Amy Dillon	South Central Public Health	PIO
Ron Aguirre	Rock Creek FD	Assistant Chief
Alison Walker	City of Twin Falls	Employee
Mitch Brooks	TF City Fire	Fire Chief
Stan Flint	Magic Valley Paramedics	Supervisor
Steve Mullen	Filer Fire Dept	Fire Chief

Representative	Agency	Position
Sjuni Bunderson	Kimberly City Police	Police Chief
John Darnell	Filer Police	Sergeant
Spencer Cutler	CSI/TF City Council	Councilman
Jeremy Engbaum	Buhl Police	Chief
Justin Hendricks	Twin Falls Police	Officer
Shane Smith	Twin Falls Fire Department	Assistant Chief
Gabriel Hammet	Twin Falls Fire Department	Fire Marshall
Aaron Zent	Rock Creek Fire	Chief
Mike Guerry	Three Creek Rangeland Fire	Chief
Nancy Duncan	City of Kimberly	Councilwoman
Andrew Stephens	Buhl Fire	Chief
Ben Medina	Castleford Fire	Chief
Jason Scott	Buhl Public Works	Director
Shane Smith	Twin Falls Fire	Assistant Chief
Craig Eckles	Kimberly City Administrator	City Administrator

Table 1.2. Stakeholders

Representative	Agency	Position
Rick Young	Magic Valley Babbist Disaster Relief	Volunteer
Emily Petersen	Living Independent Network Corporation	Advocacy Specialist
Dave Ayers	IOEM	Area Field Officer
Paul Hamlett	ARES/RACES	Operator
Keith Thompson	CSI	Campus Safety
Brain Maugham	St. Lukes	Security
Randy Hall	St. Lukes	Emergency Management
Marilyn Shiroma	OOA	Ombudsman Manager
Kristy Churchman	SIRCOMM	Deputy Director
Sue Switzer	DEQ	Administrator
Maria Contreras	Center for Community Health	Director
Paul Andersen	ARES/RACES	Operator
Ruth Ann Harker	United Way	Collective Impact Project Manager
Joe Adams	Williams Pipeline	Operations Technician
Kali Sherrell	Twin Falls Parks and Weeds	Supervisor
Brenda Mason	Public Health Preparedness	Manager
David Thompson	Office of Aging	Director
Kevin Arthur	Greater Twin Falls Health Care Coalition	Administrator
Tyler Senft	USDA	Emergency Coordinator
Lori Harrison	USDA	Emergency Coordinator
Nick Denny	Lineage Quality Assurance	Coordinator
Brock McCurdy	Intermountain Gas Company	Coordinator

Representative	Agency	Position
Matt Barnes	Twin Falls Airport	Supervisor

Table 1.3. Jurisdiction Participation

Representative	Agency (Jurisdiction Representing)	Position	Participation
Jackie Frey	Twin Falls County Emergency Management (Twin Falls County)	Emergency Services Coordinator	Lead update, attended meetings, reviewed plan, provided projects
Lynn Ginder	Hollister City Council (Hollister)	Councilwoman	Attended meetings, reviewed plan, provided plan input
Jason Scott	Buhl Public Works (Buhl)	Director	Attended meetings, reviewed plan, provided plan input
Dee Hunsaker	Murtaugh City Mayor (Murtaugh)	Mayor	Attended meetings, reviewed plan, provided plan input
Craig Hawkins	Twin Falls City Council (Twin Falls)	Councilman	Attended meetings, reviewed plan, provided plan input
Rocky Matthews	Twin Falls County (Twin Falls County)	Commissioner	Attended meetings, reviewed plan, provided plan input
Pam McClain	City of Buhl (Buhl)	Mayor	Attended meetings, reviewed plan, provided plan input
John Darnell	Filer Police Chief (Filer)	Police Chief	Attended meetings, reviewed plan, provided plan input
Sjuni Bunderson	Kimberly City Police (Kimberly)	Police Chief	Attended meetings, reviewed plan, provided plan input
Craig Eckles	City of Kimberly (Kimberly)	City Administrator	Attended meetings, reviewed plan, provided plan input
Stacie Darrow	Castleford City Clerk (Castleford)	City Clerk	Attended meetings, reviewed plan, provided plan input
Todd Stimpson	City of Hansen Mayor (Hansen)	Mayor	Attended meetings, reviewed plan, provided plan input

Update Process

The following strategy was taken to update the Plan. The plan update builds on the existing mitigation strategy developed during the previous planning process. All of the hazard analyses were updated. Information regarding climate impacts and vulnerable populations were added to each hazard.

The plan was updated based on changes to the community and priority changes including, growth in wildfire areas, impacts from climate change, demographics, and protecting vulnerable populations.

The planning process began in February 2025 as a collaborative process involving local and regional organizations involved in hazard mitigation activities, agencies that regulate development, and neighboring communities. The planning effort began by utilizing and convening the countywide LEPC committee.

Members of the committee were asked to review the current plan, provide feedback on mitigation projects, review existing hazards and risks, complete the online survey, participate in the open forum, and supply future mitigation projects for consideration. The committee also reviewed the draft 2026 plan prior to submittal to the state.

Following the update of the plan, the public was given a chance to review the final plan prior to submittal to the state. The community was given from October 2025 to November 2025 to review and provide comments on the plan. Correspondence is included in Attachment 1.

The planning process included the following steps:

- **Origination of Resources-** Twin Falls County hired the services of private consulting firm to assist in the planning process.
- **Collection of Data-** The consultant coordinated the collection of new data about the extent and occurrences of hazards.
- **Risk Assessment-** Hazards risks were reassessed based on updated data and discussed at meetings prior to being accepted in the updated plan.
- **Public Involvement-** A plan to include the public was discussed and implemented through surveys, public meetings, open forums, and review and adoption of the plan.
- **Mitigation Strategies-** An open forum was conducted to discuss past mitigation strategies and create new strategies that the community would like to see implemented.
- **Drafting of the Report-** Based on updated hazard data, public and committee input, the plan was drafted and sent to the public, state, and Federal Emergency Management Agency (FEMA) for review.
- **Adoption of the Plan-** Following all reviews, each jurisdiction adopted the plan.

Review of Existing Plans

Existing county and city plans were reviewed and incorporated into the 2026 HMP. The following plans were reviewed:

- Twin Falls County All- Hazard Mitigation Plan (2020)
- Twin Falls Comprehensive Plan (2008- in update process)
- Twin Falls Community Wildfire Protection Plan (2025)
- City of Twin Falls Comprehensive Plan (2016)
- City of Kimberly Comprehensive Plan (2017)
- City of Kimberly Transportation Plan (2009).

Identify Hazards

Twin Falls County hazards were identified, and their frequency of occurrence evaluated, using a number of resources, including:

- Hazard planning documents developed by state, federal, and private agencies;
- National Weather Service (NWS) weather data from the past 50 years; and
- 100-year historical analysis of hazardous event occurrences published by federal, state, and local government agencies.
- State and Federal Emergency Declarations.

To determine frequency of occurrence, the historical analysis of hazardous events was conducted. One of the difficult tasks facing hazard mitigation professionals is the determination of the potential frequency of a natural hazard occurrence. Comparing historical facts against technically determined probability allows one to establish confidence, or not, in published scientific predictions. The process whereby the frequency is determined is then expressed in an expected reoccurrence interval.

The estimated occurrence of the hazard is a useful element in the hazard assessment so one can distinguish between infrequent hazards, like volcano eruptions, and from frequent hazards, such as flooding. This calculation provides a useful indicator of the relative importance of each of the hazards that affect the jurisdictions, individually or collectively. The frequency of occurrence is a straight-forward calculation from the historical data and the length of that record in years. The number of hazard occurrences is divided by the number of years in the record. This yields the probability of the event occurring in any given year. For instance, if a hypothetical hazard “A” occurred 17 times in the county over the past 23 years, the probability of occurrence for that hazard in a given year would be $17 / 23 = .739$, or 73.9%. The reverse of this equation results in a reoccurrence interval in years. For example, the reoccurrence interval of this hazard is calculated as $23 / 17 = 1.35$. Hazard “A” can be expected to occur every 1.35 years. These frequencies are then correlated with magnitude to define the risk of a given hazard. To get the best calculation of return interval the largest span of years, i.e., 29 versus 5 is used even though the largest span may not be the most recent history. The reason for this is to get the greatest number of events across a large span of years.

Hazard Analysis

A risk analysis was conducted using the information gathered. The following information was gathered for each hazard to assess risk and include information concerning the potential amount of damage a hazard event can cause (i.e., hazard magnitude); how frequently such events are likely to occur (i.e., hazard frequency); and, if frequent, the repetitiveness of the loss. To the extent that such data can be obtained quantitatively, risk may then be determined as the product of the hazard’s magnitude and its frequency.

- 1) **Historical Frequency**- Number of historical occurrences with a community.
 - **None** - No occurrences in the last 50 years
 - **Low** - Five or less occurrences in last 50 years
 - **Medium** - 6-9 occurrences in last 50 years
 - **High** - More than 10 occurrences in last 50 years.
- 2) **Hazard Magnitude**- Assessment of severity in terms of fatalities, injuries, property/economic losses.
 - **Negligible** - Few if any injuries, minor quality of life lost, little to no property damage, brief interruption of facilities/services for less than 4 hours.
 - **Limited** - Minor injuries and illness, minor or short-term property damage that does not threaten structural stability, loss of essential facilities and services for 4 to 24 hours.
 - **Critical** - Serious injury and illness, minor short-term property damage that threatens stability, shutdown of essential facilities and services for 24 to 72 hours.

- **Catastrophic** - Multiple deaths, property destroyed or damaged beyond repair, complete shutdown of essential facilities/services for more than 72 hours.

Each hazard was given a ranking of low, medium, or high, as defined below, based on hazard frequency and magnitude, and potential future occurrences.

- **High** - This ranking carries the highest threat. The hazard has a high past occurrence and high potential of future occurrence and a critical or catastrophic hazard magnitude.
- **Medium** - This ranking carries a moderate threat level to the general public. Past occurrences are low to medium and future occurrences are low to high, but the magnitude is limited to critical with more isolated and less costly damage.
- **Low** - This ranking carries a low threat to the general public. Past and future potential occurrences are none to low and the hazard magnitude is negligible to limited.

Repetitive Loss

Repetitive loss designations are used to eliminate or reduce the damage to property and the disruption of life caused by repeated damage (i.e., flooding) of the same properties. The criteria to determine repetitive loss includes:

- Four or more losses of more than \$1,000 each in a 5-year period, or
- Two losses within a 10-year period that, in the aggregate, equal or exceed the current value of the insured property.

Quantify Risk

Once the hazard's frequency and magnitude are evaluated, an estimate of the overall risk severity associated with that hazard emerges. Risk is based on a hazard's historical occurrences, the probability of reoccurrence, magnitude of impact, vulnerability, and spatial extent.

Rank Severity

To assist in prioritizing mitigation activities, the severities of all hazards considered in the Plan are ranked relative to one another. Prioritization is also based on goals and objectives approved by the Planning Committee.

Develop Mitigation Strategy

As required by FEMA, this planning effort is centered on community supported hazard reduction goals to be implemented and evaluated based on measurable objectives. Mitigation projects are to be assessed against the established goals and objectives to ensure that the selected projects reduce risk, as desired.

Revise Plan

This Plan meets, and in some instances exceeds, the requirements set forth by FEMA for multi-hazard mitigation plans and Public Law 106-390 (44 CFR§201.6). Plan drafts in electronic copy were provided to the Committee for review. This Plan includes information on Plan adoption, including a promulgation page for the county and an agreement to participate page for each incorporated city.

Plan Review

The initial plan review was conducted by the Planning Committee and the public during development. Once the Plan was completed, it was submitted to the Idaho Office of Emergency Management (IOEM), and then to FEMA Region 10's Hazard Mitigation Officer for review. The Twin Falls County Board of County Commissioners also reviewed the Plan in a parallel time frame.

Participating Jurisdictions

To be included as an adopting jurisdiction in the Twin Falls County All Hazard Mitigation Plan, each jurisdiction is required to participate in the process. The following representatives were involved in the planning process from each adopting jurisdiction:

- Twin Falls County: Jackie Frey, Twin Falls County Emergency Manager, led the update process.
- City of Murtaugh: Dee Hunsaker, Murtaugh City Mayor, attended meetings and email with committee members, provided plan review and input.
- City of Hollister: Lynn Ginder, Hollister City Councilwoman, attended public/committee meetings, provided plan review and input.
- City of Kimberly: Sjuni Bunderson, Kimberly City Police Chief, meetings, email with committee members, provided plan review and input.
- City of Buhl: Pam McClain, City of Buhl Mayor, attended public/committee meetings, provided plan review and input.
- City of Filer John Darnell, Filer Police Chief, attended meetings, teleconference with committee members, provided plan review and input.
- City of Twin Falls: Craig Hawkins, Twin Falls Councilman, attended public/committee meetings, provided plan review and input.
- City of Castleford: Stacie Darrow, City Clerk, attended public/committee meetings, provided plan review and input.
- City of Hansen: Todd Stimpson, City of Hansen Mayor, teleconference and email with committee leadership, provided plan review and input.

One-on-one discussions between planning committee leadership and the representatives of the jurisdictions occurred as needed to ensure understanding and involvement in the update process. Each jurisdiction was involved in at least one public meeting over the course of the update process.

Stakeholder Participation

Email correspondence (Attachment 1) was sent to several local and regional agencies involved in hazard mitigation activities, agencies that regulate development, and neighboring communities, including the following:

- Twin Falls Planning and Zoning
- Elected Officials (mayors, county commissioners, council members)
- US Forest Service
- BLM

- Highway districts
- Canal Companies
- Fire Departments
- Hospital
- Health Department
- Weed Abatement
- Idaho OEM
- Census Bureau
- US Army Corps of Engineers
- Law Enforcement
- Public Works
- Idaho Transportation Department
- School Districts
- National Weather Service
- SIRCOMM
- Department of Environmental Quality
- Jerome OEM
- Amateur Radio Emergency Services/Radio Amateur Civil Emergency Service.

Representatives from each agency were invited to attend meetings and provide review and input during the plan update via email correspondence. As documented through meeting sign-in sheets, attendance was high at public meetings from these agencies.

Public Involvement

Public involvement was made a priority to ensure the opportunity to participate in the plan update process. Public involvement was made available through public meetings, plan review, an open forum, and the participation in an online survey.

The first public meetings were completed in conjunction with LEPC meetings to increase community participation. LEPC meetings are announced on the county website and posted in the county building foyer 10-days in advance of the meetings. Emails were also sent out to multiple agencies throughout the county and state.

Public meetings were held at the county building over the course of the update process. Notices of the meetings were published in advance, as required by open meeting laws in Idaho, by placing notices of the meetings in the local newspapers and physically posting notices in public locations. The meetings were supported by the Twin Falls County Office of Emergency Management Coordinator.

A public questionnaire was utilized to gain a subjective measure of how the public and committee participants believe that hazards impact their community. These results were then used to assist in the development of requirements for risk reduction projects. This involvement of the public serves to validate and raise awareness of the planning process and, thus, generate support for elected and appointed officials as they seek to implement the mitigation actions identified in the Twin Falls County HMP.

The Twin Falls County Office of Emergency Management hosted a booth at the county fair where mitigation information was provided to the community and public feedback about hazards impacting the community were solicited. Over 200 people visited the booth, obtained information about hazards in the county, and provided feedback.

The first kick-off meeting was held February 2, 2025, in combination with the LEPC meeting. Many of the planning meetings were held in conjunction with the Twin Falls LEPC meetings to promote the involvement of stakeholders and community members.

February 2025

- HMP Update kick-off.
- Live survey for participants.
- Discussed the update process and the 2023 FEMA changes that will be implemented

March 2025

- Meeting with Susan Cleverly to discuss update.
- CWPP Fire Meeting to discuss CWPP update in HMP.
- Meeting with Twin Falls fire to discuss HMP update.
- Meeting with North Wind and Rock Creek Fire Department.
- Meeting with Owyhee HMP planning meeting to discuss TF HMP update.

April 2025

- Meeting with representatives from Buhl, Kimberly, Hollister, Murtaugh on HMP update.
- Meeting with representative from parks/weeds to address county projects for HMP.

May 2025

- Meeting with fire to review CWPP projects

July 2025

- Meeting with Owyhee HMP planning group.
- City of Twin Falls Comprehensive Plan Survey
- LEPC meeting discussing HMP update.
- EM meeting to discuss HMP update and projects.

August 2025

- Fair booth public outreach.

September 2025

- Open forum, public, LEPC partners/city officials.

Public Comment Period

A public comment period was held from October 2025 through November 2025 to allow community members an opportunity to review the draft plan. Notice of the review was provided at the meetings and the draft plan was sent out through email (Appendix A). Comments received were incorporated into the plan prior to submittal to the state for review. The final plan will be available on the Twin Falls County website and public libraries at adopting jurisdictions.

Public Questionnaire

Risk perception is the subjective judgment that people make about the characteristics and severity of a risk. Several theories have been proposed to explain why different people make different estimates of the magnitude of risks. Risk perception is a significant part of the Public Involvement Section of the Twin Falls County Hazard Mitigation Planning Process. An electronic survey was used to gather public input and to measure the public attitudes towards the risk posed by the hazards in Twin Falls County. The survey was administered to members of the Hazard Mitigation Committee and members of the public; a total of 116 people responded to the survey. The complete results of the survey are presented in Attachment 2.

Continued Public Participation

The Twin Falls OEM is dedicated to the concept of public involvement in the planning process, including the review and updating of the HMP. Copies of the plan will be made available to the public through the agency website and by appropriate county departments and outside agencies. To this end, public meetings will be held, when deemed necessary by the Twin Falls County OEM Coordinator, providing a forum where the public can express concerns, opinions, or new alternatives. These will be recorded and considered by the committee when updating the plan. Under the direction of the Board of County Commissioners, the Twin Falls County OEM Coordinator will be responsible for using county resources to publicize public meetings and to maintain public involvement.

Section 2. County Profile

Twin Falls County is the most populous county in central Idaho. It is home to the College of Southern Idaho and the famous Shoshone Falls, sometimes called the Niagara of the West, with an impressive 212-foot drop. The county is not only a retail hub for most of central Idaho but is also a recreational hot spot for travelers. The county has eight incorporated communities, including Buhl, Castleford, Filer, Hansen, Hollister, Kimberly, Murtaugh, and Twin Falls City. Unincorporated communities include Roseworth, Berger, Rogerson, and Rock Creek. Most of these communities are located along the northern edge of the county near the Snake River.

Location

Twin Falls County is located in south-central Idaho on the north edge of the Great Basin in an area known as the Magic Valley (see Figure 2.1). It comprises 1,957 square miles and is bordered on the north by the Snake River and Gooding and Jerome Counties, on the west by Owyhee County, on the east by Cassia County, and on the south by the Nevada border.

Topography and Geography

This area and a large portion of southern Idaho are described as a semiarid steppe environment receiving approximately 8 to 10 inches of precipitation annually. Native vegetation in this climate primarily consists of 10 to 15 species of sagebrush and bunchgrasses. The map provided as Figure 2.2 shows that the vast majority of the county is relatively flat, making it ideal for extensive agricultural development. The southwest corner, however, consists mostly of gently rolling hills that extend into Nevada. These slopes are mild but unsuitable for farming and are primarily managed by the Bureau of Land Management (BLM) or privately-owned ranches. The U.S. Department of Agriculture (USDA) Forest Service owns the steeper slopes rising in the southeast corner of the county where elevation reaches a height of approximately 7,200 feet, with stunted subalpine vegetation communities on the upper slopes¹.

Lakes and Rivers

The only major body of water in the county is the Snake River, which forms the northern border of the county and runs through the Snake River Gorge. During the Great Migration over the Oregon Trail (and still today), the Snake River was a large financial entity in Twin Falls County, providing many recreational and economic resources. Other important bodies of water in the county include Murtaugh Lake, Salmon Falls Creek Reservoir, Salmon Falls Creek, Cedar Creek Reservoir, and a multitude of small streams, springs, and irrigation canals. Water areas comprise less than 1% of the total area in the county.

Hazard Risk Implications

The topography and geography have not changed since the last update; therefore, no additional hazard impacts are likely.

¹ Schlosser, William E., 2004, Twin Falls County WUI Wildfire Mitigation Plan. Page 27.

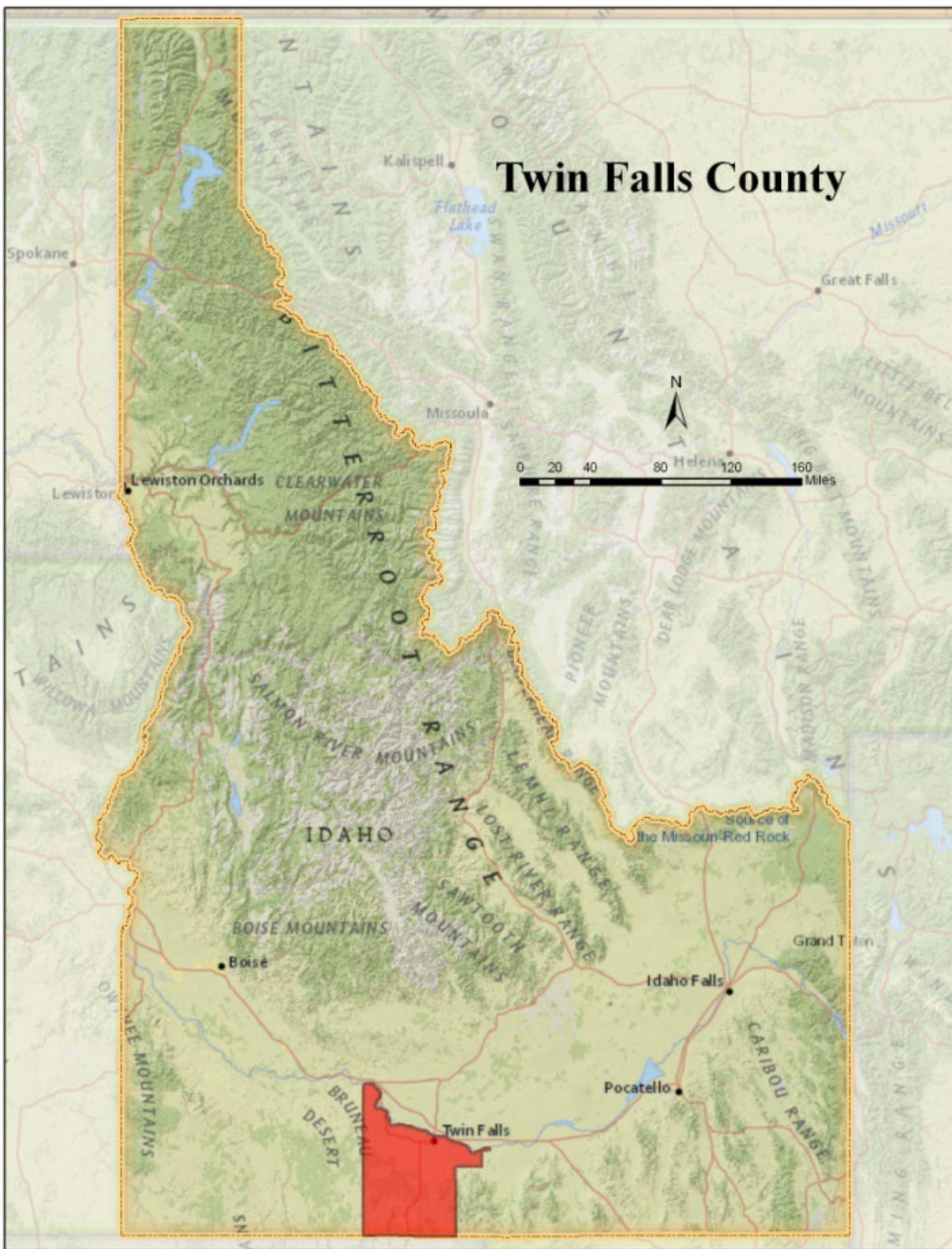


Figure 2.1. Twin Falls County Location Map

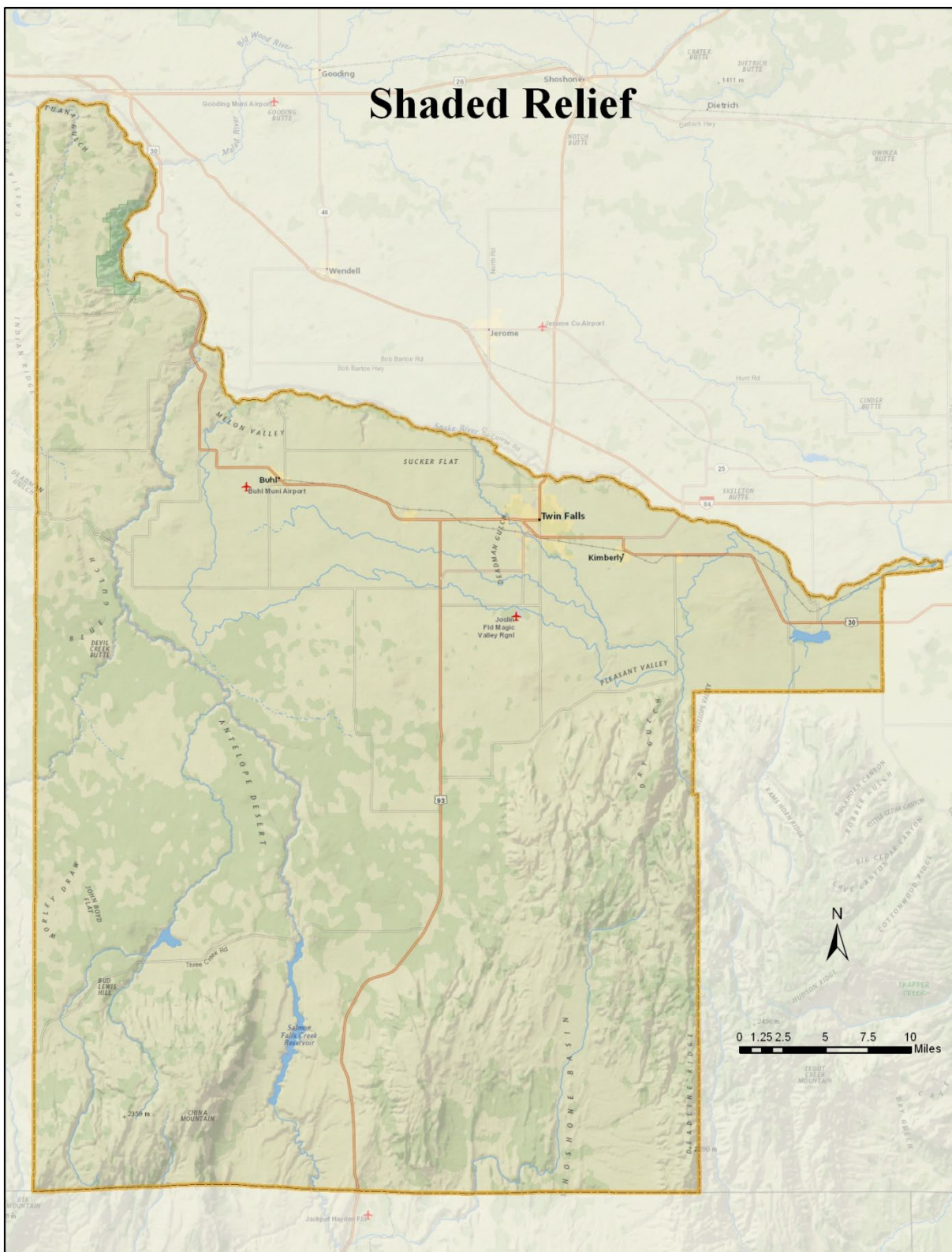


Figure 2.2. Twin Falls County Shaded Relief

Geology

Notable geological features in Twin Falls County are generally a result of two sources. The first and most prominent is volcanic activity. Figure 2.3 shows the general dispersion of volcanic deposits throughout the valley. The second is from the great flood of ancient Lake Bonneville. The map in Figure 2.3 identifies different geological formations throughout the County.

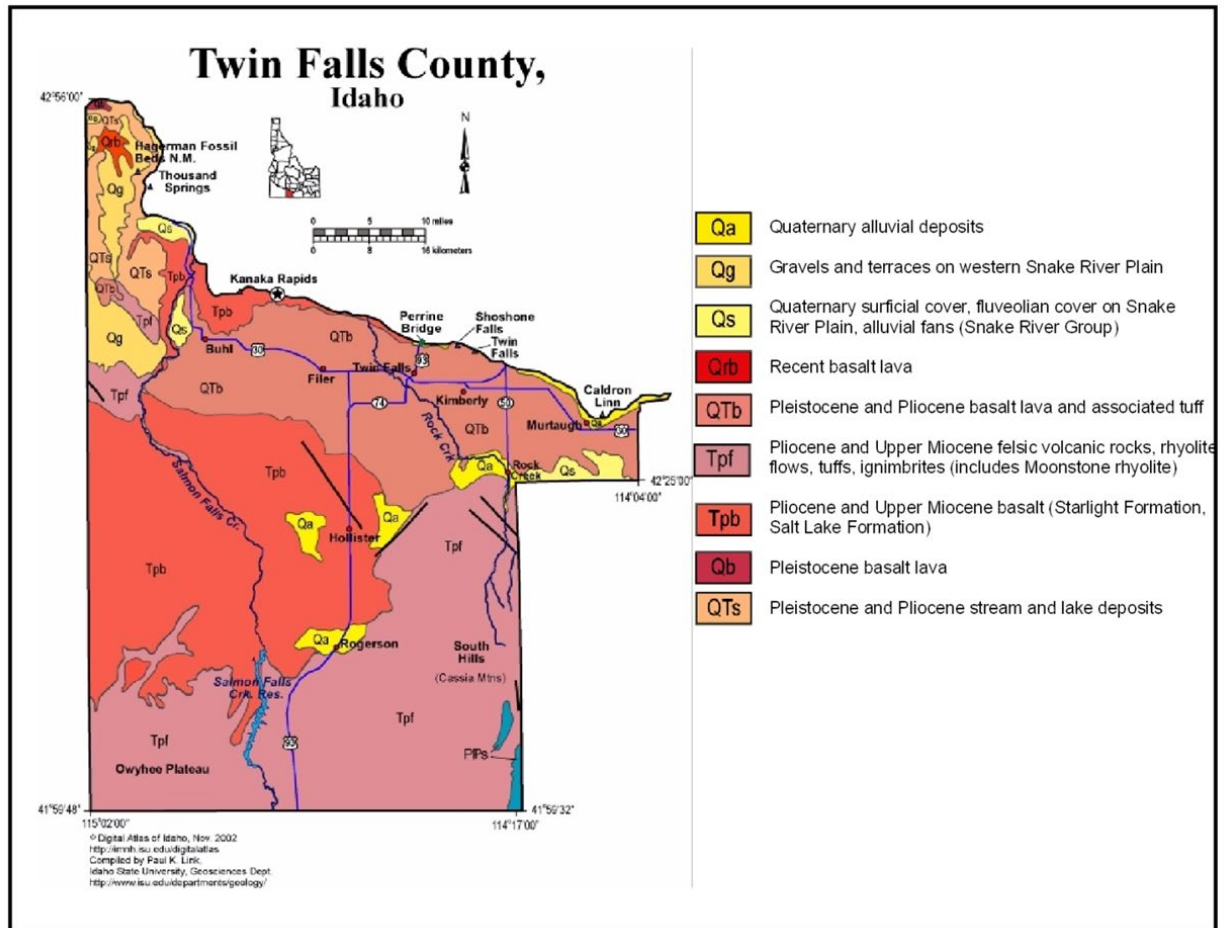


Figure 2.3 Twin Falls Geology

The southwestern area of the valley includes the South Hills or Cassia Mountains, made of a felsic pyroclastic rock. This is visible in Rock Creek Canyon as spectacular piles of north dipping rhyolite ash flows. Under these rhyolites are Pennsylvanian and Permian sedimentary rocks that consist of mixed carbonate and shale. Mesozoic marine sediments of limestone, dolomitic limestone, quartzite, and chert are also exposed in the Cassia mountains and in a small area southeast of Hollister².

To the northwest are the foothills of the Owyhee Plateau, also underlain by felsic pyroclastic and mafic volcanic flow and Miocene ignimbrites.

² Idaho Department of Water Resources, 1990, Geothermal Resources Analysis in Twin Falls County, Idaho.

The Snake River, which deepened during the Lake Bonneville Flood approximately 15,000 years ago, forms the northern boundary of the county. Shoshone Falls cascades over Miocene rhyolite of the same age as the ash flows in the South Hills. Twin Falls is cut in Quaternary basalt. Huge gravel bars of "melon gravel" line the Snake River Canyon west of Twin Falls City near Buhl and Hagerman. Large amounts of alluvial deposits left from the flood of Lake Bonneville also exist along the Snake River.

Pliocene fossils beds of Hagerman Fossil Beds National Monument are located in the northwestern corner of Twin Falls County. These river and lake beds contain diverse mammal, fish, reptile, and other fossils that are approximately 3 to 4 million years old.

Thermal water is prevalent throughout the county but is primarily found in the northern portion of the county near Buhl, Filer, and Twin Falls. The area around Hollister and Rogerson also contains springs and wells that produce thermal water, likely a result of fractures in the volcanic rock underneath³.

Hazard Risk Implications

The geology has not changed since the last update; therefore, no additional hazard impacts are likely.

Climate

Twin Falls County, at an elevation of 3,729 feet, experiences a dry climate with relatively low humidity. Average annual precipitation is 0.68 inches, and average annual snowfall is 18 inches. Table 2.1 provides an overview of the climate in Twin Falls County. Note that the highest average temperature is 87.7 degrees Fahrenheit (°F) in July, while the average low temperature is 20.3°F in December.

Table 2.1. Twin Falls Climate Summary

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (°F)	43.9	41.4	49.7	61.2	71.6	78.3	87.7	86.0	77.5	60.8	47.1	36.0	59.3
Average Min. Temperature (°F)	26.6	22.1	29.7	35.6	45.5	50.4	66.9	56.0	47.7	37.3	25.4	20.3	38.6
Average Total Precipitation (in.)	0.83	0.55	1.07	0.54	1.50	0.48	0.01	0.01	0.0	1.34	1.29	0.57	0.68
Average Total Snowfall (in.)	6.6	5.1	2.8	1.3	0.5	0	0	0	0.1	0.4	3.2	6.3	26.2

The climate divisions within Idaho are shown in Figure 2.4.

³ Idaho Department of Water Resources, 1990, Geothermal Resources Analysis in Twin Falls County, Idaho.

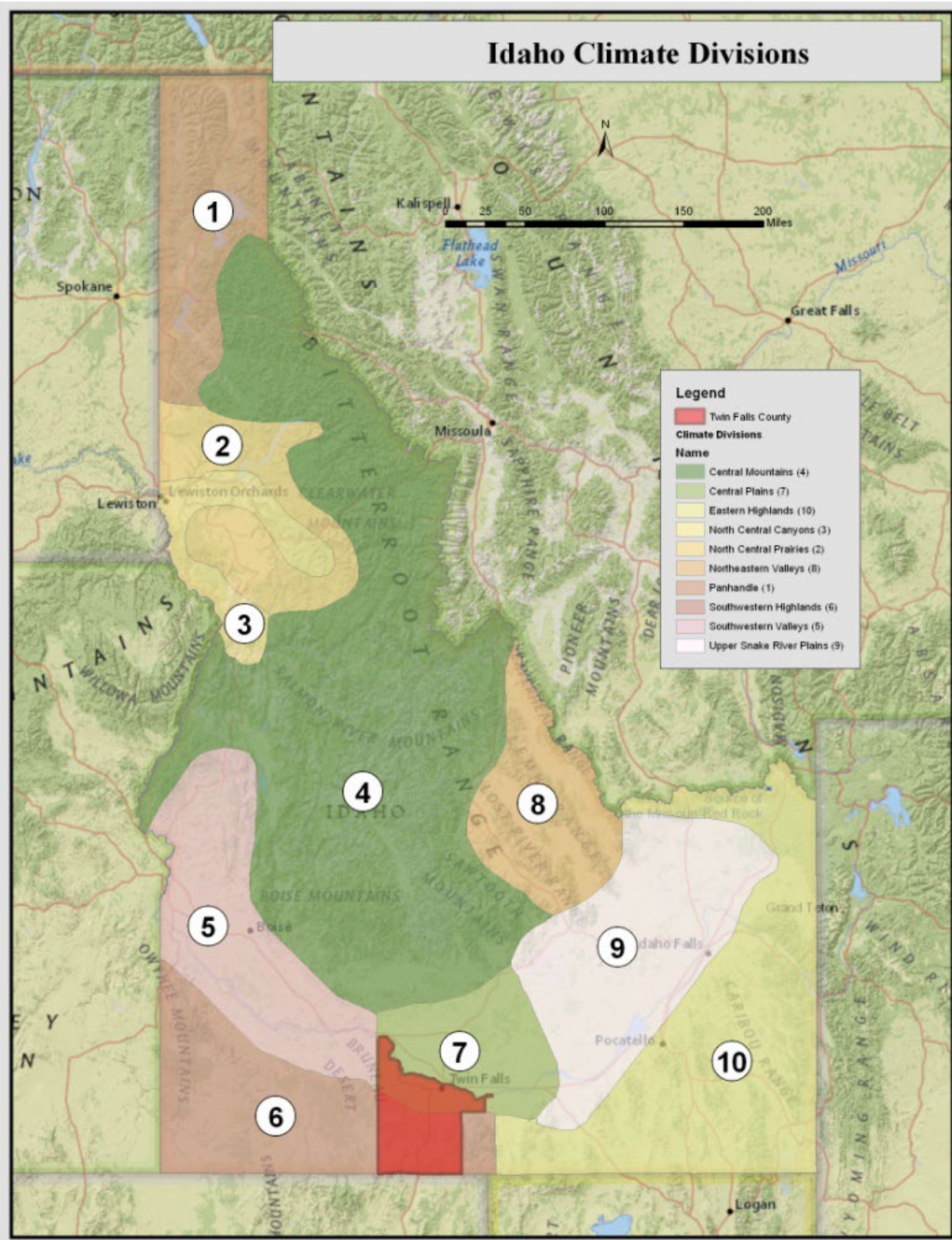


Figure 2.4. Idaho Climate Divisions

Hazard Risk Implications

Climate change has the potential to impact the severity and frequency of natural hazards. As climate patterns shift, severe weather is becoming more extreme resulting in more precipitation events, declining snowpack, increasing heat waves, and increased drought conditions across the state and county. Idaho has seen increased drought conditions, increased wildfire impacts, and more severe weather conditions with subsequent risk and costs impacts across the state.

Land Ownership and Land Use

The map provided as Figure 2.5 shows the distribution of federal and non-federal lands in Twin Falls County. Table 2.2 shows the distribution of land by type. Of the 1,233,583 total land acres within the county, approximately 619,000 acres are owned by the Federal Government (50.2% of total) and 578,000 acres are privately owned (46.8% of total), as shown in Table 2.3. There are approximately 484,000 acres of farmland, including 275,000 acres of cropland. Potatoes, corn, sugar beets, peas, grain, malt barley, and alfalfa are commonly grown in Twin Falls County. Twin Falls County is the largest producer of dry beans, second largest producer of alfalfa hay, and the third largest producer of silage corn in the State of Idaho. Other crops grown are oats, peas, apples, peaches, pears, sweet cherries, apricots, and nectarines. There are approximately 100 acres of orchards located mostly in the Snake River canyon. Commercial cattle raising operations and industries associated with beef production are also very widespread. Approximately 522,290 acres (42.3% of the total acres) in the County are managed by the BLM (Table 2.3), much of which has been leased for livestock grazing.

Table 2.2. Land use type in Twin Falls County

Land Use Type in Twin Falls County		
Land Use	Total Acres	Percent
Forest	1,730	25%
Grassland	703,142	17%
Shrubland	271,388	12%
Mixed Cropland	209,709	39%
Water	2,965	1%
Urban	6,919	3%
Other	7,660	0.6%

Table 2.3. Land Ownership Distribution in Acres

Total Area	1,233,583
Private Lands	577,491
Federal Lands	619,338
Forest Service	92,659
BLM	522,290
National Park Service	4,345
Military	45
Other Federal	0
State Lands	30,596

Table 2.3. (continued)

State Trust Lands*	0
Other State	30,596
Tribal Lands	0
Water	6,158
City, County, Other	0
Percent of Total	
Private Lands	46.8%
Federal Lands	50.2%
Forest Service	7.5%
BLM	42.3%
National Park Service	0.4%
Military	0.0%
Other Federal	0.0%
State Lands	2.5%
State Trust Lands*	0.0%
Other State	2.5%
Tribal Lands	0.0%
Water	0.5%
City, County, Other	0.0%

Hazard Risk Implications

Land Use has not changed significantly since the last update; therefore, no additional hazard impacts are likely.

Resource Dependency

The incorporated communities of Twin Falls County have been evaluated by the University of Idaho, College of Natural Resources Policy Analysis Group (PAG), for their degree of natural resource dependency. Idaho communities with more than 10% employment in resource-based sectors (i.e., wood products, travel and tourism, agriculture, and mining) were evaluated by PAG. Their findings indicate that Buhl, Filer, Hollister, Murtaugh, and Castleford are “Agriculture Only” dependent communities. Twin Falls City is considered a “Travel and Tourism” dependent community. Kimberly and Hansen are a combination of “Travel and Tourism and Agriculture” dependent. The PAG further evaluated Idaho communities based on their level of direct employment in several industrial sectors. Their findings for incorporated communities in Twin Falls County are summarized in Table 2.4.

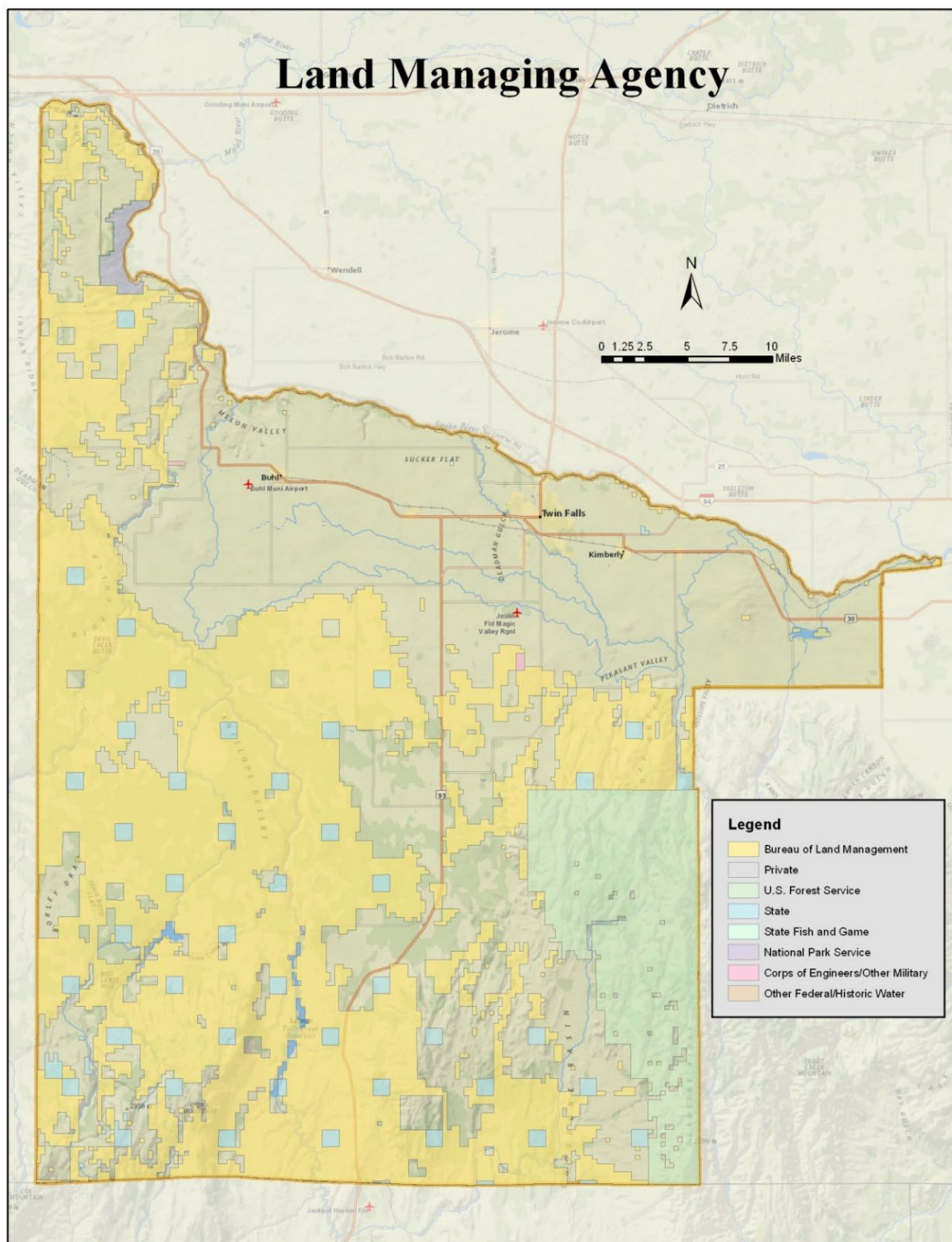


Figure 2.5. Land Managing Agency

Table 2.4. Natural resource dependency for communities in Twin Falls County

Natural Resource Dependency					
Community	Economic Diversity Index	Agriculture	Timber	Travel & Tourism	Mining & Minerals
Buhl	Med. High	Med. High	Low	Med. Low	Low
Castleford	Med. High	High	Low	Low	Low
Filer	High	Med. High	Low	Med. Low	Low
Hansen	Med. Low	Med. High	Low	Med. High	Low
Hollister	Low	High	Low	Low	Low
Kimberly	Med. High	High	Low	Med. High	Low
Murtaugh	Med. Low	High	Low	Low	Low
Twin Falls	High	Low	Low	Med. High	Low

A “low” level of direct employment represents 5% or less of total employment in a given sector, “med low” 6 to 10%; “med high” 11 to 19%; and “high” 20% or more of total employment in a given sector.

Hazard Risk Implications

Natural resource dependency has not changed significantly since the last update; therefore, no additional hazard impacts are likely.

Demographics

U.S. Census Bureau population data for Twin Falls County and its eight incorporated cities for the years 2020 and 2025 are shown in Table 2.5.

Table 2.5. Population changes for Twin Falls County and its incorporated cities

Total Population and Population Change from 2020-2025			
	2020	2025	Population change
Twin Falls County	90,046	97,826	9%
Twin Falls City	51,807	56,849	10%
Buhl	4,624	4,813	4%
Castleford	166	232	40%
Filer	2,837	3,079	9%
Hansen	1,414	1,127	-20%
Hollister	353	265	-25%
Kimberly	4,883	5,831	19%
Murtaugh	146	130	-11%

Between 2020 and 2025, the county population grew 9% from 90,046 to 97,826, as compared with the State of Idaho, which grew by 15%.

Hazard Risk Implications

The population trend has experienced significant growth throughout the county. As the population trend increases, building codes, land use policies, and strategic growth and development should deter development in hazard prone areas.

Development has increased in wildland areas, increasing the vulnerability to wildfires in these areas. No building permits have been issued in floodplain areas in Twin Falls County or participating jurisdictions. An increase in building permits have been issued in wildfire urban areas throughout Twin Falls County.

Critical Infrastructure

County Facilities

The Twin Falls County government offices and County Assistance office are housed in two main buildings in downtown Twin Falls: (1) County Courthouse at 425 North Shoshone Street, and (2) the County West Annex Building on Addison Avenue West. The County West Campus buildings include offices for the County Clerk/Auditor/Recorder, the County Commissioners (along with their hearing chambers), the Assessor, County Treasurer, and Planning and Zoning. The Prosecuting Attorney and the Sheriff's Office are located in the Courthouse.

Other government offices include the Twin Falls County Criminal Justice Facility (juvenile) and the Juvenile Detention Center at 650 Addison Ave West, the Parks and Recreation Department and Weed Bureau at 450 W. 6th Avenue, and the Adult Probation Office at 231 4th Ave North.

Public Services and Facilities

With the exception of the county Sheriff's Office, Twin Falls County does not provide any public services directly nor does the county operate any sort of coordinating public service authority, although informal cooperative agreements have been established among certain districts. All of the county's necessary services are divided among individual public service districts and city offices. Near or within the boundaries of the areas of city impact, most services are provided by the cities or their respective service districts. In other unincorporated areas of the county, services are provided either by the various public service districts or individual landowners.

Sewer and Water

Within the cities and the areas of impact, domestic water distribution and sewage collection and treatment systems are provided by the cities. Decisions regarding development and the availability of sewer and water in the areas of impact rest entirely with city governments. Beyond the boundaries of the areas of city impact, city service departments may opt to extend sewer or water lines only if boundaries are re-designated.

In the outlying, unincorporated areas of the county, water is supplied by individual wells, and sewage is treated by septic systems. For any parcel of land, sewer and water arrangements must meet the standards of the Idaho Department of Health. All septic systems, regardless of size or location, must be approved by the South-Central Public Health District. In addition, standards may also be enforced by the Idaho Department of Water Resources (IDWR) and the Idaho Department of Environmental Quality (IDEQ).

Water availability in Twin Falls County has become a concern because most of the county's developed water resources are concentrated near the Snake River. Surface and groundwater are available in this area, and city water systems utilize extensive well networks from the Snake

River Aquifer. Infrastructure to distribute water will remain concentrated in the northernmost part of the county.

Individual wells are the primary source of water in less developed parts of the county. The yield of such wells is sometimes marginal farther away from the Snake River. Water quality also becomes a problem for wells when recharge waters are affected by agricultural run-off or septic systems. Sewer service and discharge is provided in all incorporated cities. The City of Twin Falls treats the sewer discharge for the City of Kimberly.

Waste Management

Twin Falls County is one of the seven Magic Valley counties that own Southern Idaho Solid Waste, a special local government unit providing solid waste management services. Southern Idaho Solid Waste provides disposal facilities for Twin Falls County residents, businesses, and industries at three waste transfer stations.

Five solid waste collections companies and the City of Buhl provide residential and commercial collection services through the county. Two commercial recycling facilities, along with a residential curbside recycling program, are located in Twin Falls City, while five public satellite recycling drop-off sites and six Twin Falls School District recycling sites provide public sector recycling services in the county.

Public Utilities

The major utilities in the county are electrical, gas, telecommunications, and irrigation. Potential solar and wind power resources are also available.

Idaho Power Company supplies electric distribution lines for all homes and commercial areas of the county.

Telecommunications lines coincide with the main power transmission and distribution lines throughout most of the county. In Filer, Hollister, and Rogerson, telephone service is provided by the Filer Mutual Telephone Company.

Intermountain Gas Company provides services to cities in the northern part of the county. Most of the outlying unincorporated areas of the county rely on home heating oil, coal, or electric heat. The availability of geothermal resources and solar energy do present some feasible energy development alternatives, although minimal exploration of these resources for public use has taken place to date.

Propane services are provided by private companies and are used as an energy source in locations not served by Intermountain Gas Company.

Water Resources

This section includes discussion of existing surface and groundwater resources in the local region. Water quality and availability in the county is largely dependent on the relationship between the Snake River and the underlying aquifer beneath Twin Falls County on the south side of the river.

Surface Water

The Snake River and its tributaries are the principal sources of surface water in Twin Falls County. The Snake River supports such uses as irrigation, recreation, and wildlife and fish habitat. The Snake River watershed upstream of King Hill, Idaho, commonly called the Upper Snake River Basin, drains an area of 35,857 square miles in Idaho, Wyoming, Nevada, and Utah. At Heise, Idaho, upstream from nearly all irrigation uses, the average flow of the Snake River is approximately 5 million acre-feet per year. Irrigation diversions along the Snake River, however, reduce the flow at Milner Dam, where the river enters Twin Falls County, to 2.5 million acre-feet per year. Major tributaries of the Snake River within the Twin Falls County area include Rock Creek, Deep Creek, Mud Creek, Cedar Draw, and Salmon Falls Creek. Nearly all of these carry substantial amounts of irrigation return flow and/or groundwater discharge. Other significant surface water drainages in Twin Falls County include Cottonwood Creek, McMullen Creek, Fifth Fork of Rock Creek, Shoshone Creek, and Big Creek. Salmon Falls Reservoir has an active capacity of approximately 185,000 acre-feet, and Cedar Creek Reservoir stores roughly 30,000 acre-feet of water. Other reservoirs of significant yield are located on Deep Creek, Worley Draw, Cottonwood Creek, and along various laterals of the county's canal system.

Irrigation

Since annual rainfall is limited, irrigation is vital to crop production in Twin Falls County. Surface water is the main source of water for irrigation use with more than 83% of cropland being irrigated by surface water sources in Twin Falls County. The Twin Falls Canal Company diverts water from Milner Dam and delivers water to approximately 203,000 acres of irrigated cropland through a system consisting of 110 miles of main canals and over 1,000 miles of laterals and drains. The High-Line Canal and Low-Line Canal are the main canals that supply water to laterals and farms. The Canal Company also holds storage rights for 96,000 acre-feet at Jackson Lake and 150,000 acre-feet at American Falls. The average annual diversion for irrigation by the Twin Falls Canal Company is 1,113,700 acre-feet of water, with an average of 5 acre-feet per acre.

Milner Irrigation District in Twin Falls County diverts an average of 60,000 acre-feet of water from Milner Dam yearly. Approximately 13,500 acres in the eastern portion of Twin Falls County are served by the Milner Irrigation District. Below Milner Dam, the majority of irrigation withdrawals from the Snake River require high-lift pumping because of the steep canyon walls. Other irrigation districts include the Southwest Irrigation District, Salmon River Canal Company, Magic Water Users, Rosewood Irrigation District, and a few small independent water users' groups.

The irrigation companies included in Twin Falls County are shown in Figure 2.6.

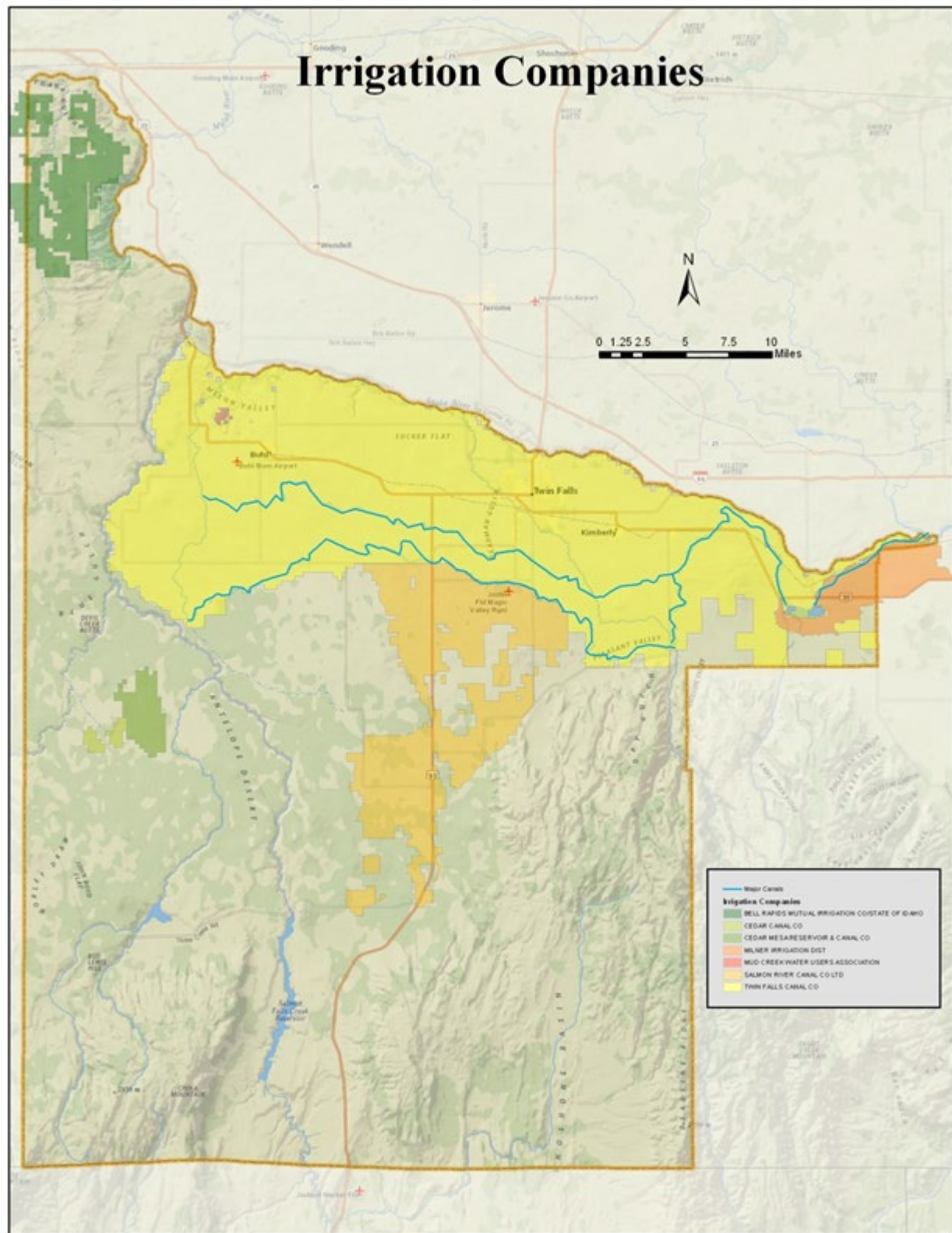


Figure 2.6. Irrigation Companies Map

Groundwater

One of the largest groundwater systems in the United States, the Snake River Plains Aquifer, borders Twin Falls County to the north. This aquifer provides the largest inflow of water to the Snake River from Milner Dam to King Hill, discharging approximately 5,700 cubic feet per second (cfs). Another, shallower aquifer in the Twin Falls County region discharges approximately 500 cfs into the Middle Snake River reach from Milner to King Hill.

The primary source of recharge to the Twin Falls aquifer groundwater system is seepage of surface irrigation water from the Twin Falls Canal Company. Other sources of recharge include the Salmon Dam Reservoir, reservoir irrigation supplies, and the precipitation accumulated and transported in drainages from the mountains bordering the county on the south.

Groundwater is the sole source of potable water for the residents of Twin Falls County. Approximately 70% of the county residents rely on municipal systems for their drinking water, all of which use groundwater as their source. Municipal systems include Twin Falls, Filer, Castleford, Kimberly, Hollister, Hansen, Rogerson, and Murtaugh. There are many other public water systems within the county, including mobile home and trailer parks, campgrounds, Recreational Vehicle (RV) parks, homeowner associations, and others.

Transportation

The safe and efficient movement of goods by an efficient transportation network is an important component of the economic strategy for Twin Falls County. Goods are transported via air, rail, and truck in Twin Falls County and all play an important role in promoting the efficiency of county transportation.

Roadways

Roads provide the primary transportation mode in Twin Falls County. A complex network of roads and highways of varying conditions consist within the county and are governed by different agencies working together to unite the region with an efficient and functional roadway system. Federal and state highways in Twin Falls County operate under the authority of the Idaho Transportation Department (ITD). The federal highways in the county are US Highways 30 and 93. The only state highway is a short section of US Highways 50 and 74. Twin Falls County has four Highway Districts: Buhl, Filer, Murtaugh, and Twin Falls. These four districts are responsible for all county highway maintenance other than those within the Cities of Twin Falls, Buhl, Filer, Kimberly, and Hansen. Each of these cities is responsible for the transportation needs within its annexed boundaries.

Bridges

There are over 100 bridges exceeding 20 feet in Twin Falls County. Six are classified in poor condition. All other bridges have ratings of fair to good according to Department of Transportation (DOT).

Airports

Twin Falls County has two airports: (1) Joslin Field Magic Valley Regional Airport located in Twin Falls and (2) Buhl Municipal Airport in Buhl. Joslin Field has daily connections to Salt Lake City, UT and will begin twice weekly service to Las Vegas, NV in the spring of 2026. Joslin Field also serves as a diversion airport for BOI, SLC, and DEN airports if those airports experience inclement weather. Joslin Field also hosts a variety of general aviation and military aircraft operations. Buhl Municipal Airport serves small private planes and crop dusters.

Railroads

There is no passenger rail service in Twin Falls County. Freight service is provided by Union Pacific Railroad, Great Northwest Railroad, and Eastern Idaho Railroad. The majority of the freight is grain, potatoes, and other agricultural commodities.

Section 3. Risk Assessment

A Hazard Risk Assessment is an integral part of the core functions of emergency management, which include (1) prepare, (2) respond, (3) recover, and (4) mitigate. Emergency management is a vital part of a community's ability to prepare and recover from an emergency. The HMP supports a community's ability to evaluate hazards facing the community and where mitigation actions can be focused.

Hazard Definitions

Hazards that pose a threat to human life, health, and well-being are myriad and no attempt is made here to compile an exhaustive list. Those that are addressed in disaster planning are generally categorized as "natural" or "non-natural." FEMA contains a thorough discussion of hazards in the section entitled "FEMA's Multi-Hazard Identification and Risk Assessment (MHIRA)"⁴. Some hazards are a threat to all geographic areas, while others (e.g., tsunami in coastal regions) are not. Hazards that have been identified as significant in this county and that are considered in this AHMP include:

Natural Hazards

- Severe Weather
- Drought
- Flooding
- Dam/Canal Failure
- Earthquake
- Landslide/Mudslide
- Wildfire.

Non-Natural Hazards

- Structural Fire
- Radiological Event
- Hazardous Material Event
- Riot/Demonstration/Civil Disorder
- Terrorism
- Biological (Pandemic, vector borne diseases)
- Cyber Security
- Utility Disruption

Based on the location, past occurrences, and historical improbability, hurricanes, cyclones, and tsunamis are not assessed in Twin Falls County.

⁴ http://www.fema.gov/plan/prevent/fhm/ft_mhira.shtm

Hazard Profile

The following information was gathered for each hazard:

- Hazard Description - Description of the hazard.
- Historical Frequency - Data to support how often the hazard has occurred.
- Hazard Impact - Potential impacts of the hazard on the community.
- Loss Estimates - Loss estimates from each hazard.

Limitations

Hazard analysis is complicated and should be considered an initial step in evaluating the community's hazards. Hazard analysis provides valuable information to help identify goals, prioritize actions, plan and prepare, and recover and mitigate future hazards. Hazard assessment is not an exact science and cannot predict future hazards or their impacts. As the community changes, so do the hazards and impacts.

Hazard Loss Modeling

To supplement the risk analysis, hazard loss modeling was utilized. The updated HAZUS, a regional multi-hazard loss estimation model that was developed by FEMA and the National Institute of Building Sciences (NIBS), along with Geographical Information System (GIS) mapping, was used to estimate the losses from potential flood and earthquakes. HAZUS estimates losses related to damage before, during, or after the disaster occurs.

Hazard Risk Determination

Due to the complexity of assessing potential risk from each hazard, the risk determination of each hazard was based on the probability of the hazard event occurring and its potential impacts. At the fundamental level, risk is a function of frequency and consequence. While defining the frequency of a hazard is straightforward, measuring consequence is more complex. Previous ratings, hazard modeling, GIS data, and planning committee members were used to measure consequences of hazards.

Emergency Declarations

Twin Falls County has had five Federal Disaster Declarations since 1950:

- 2005 Hurricane, Disaster number 3244, Hurricane Katrina
- 2017 Flood, Disaster number 4310, flooding
- 2020 Biological, Disaster number 3467, COVID-19
- 2020 Biological, Disaster number 4534, COVID-19

There have been no State Disaster Declarations in Twin Falls that did not result in Federal Declarations since 2015

Severe Weather Hazards

The impact of weather hazards may be widespread (i.e., drought) or more localized (i.e., lightning); however, all have the potential to be severe and directly life-threatening. Historical weather data are generally available in sufficient detail over long time periods, allowing for reasonably accurate risk assessment for planning purposes.

Severe weather includes those hazards that are typically found during the spring, summer, and early fall season of the year in Twin Falls County. Included in this category are extreme heat, extreme cold, lightning, hail, straight line wind, tornado, and winter storm. Each hazard is examined independently; however, it is recognized that these hazards typically occur together. There were no State or Federal Disaster Declarations for severe weather since the last update.

Probability of Future Occurrence:

Based on previous events throughout the county, as listed in the tables below, there is a 100% probability that severe weather will occur each year in Twin Falls County.

Climate change will likely result in an increase in severe storms. Increases include intense rain and snowfall, powerful winds and more destructive hailstorms. Droughts will increase in severity and frequency with a changing climate.

Repetitive Loss:

Severe weather occurs frequently in Twin Falls County, and it is assumed that there are repetitive losses especially caused by Straight Line Wind damage; however, this type of loss is not reported to a single point and thus is hard to track and quantify.

Severe Weather Hazard Evaluation

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		High	
Impact/Consequence:		Medium	
Community Vulnerability:		Medium	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
High	High	High	High
Kimberly	Hansen	Murtaugh	Hollister
High	High	High	High

Extreme Heat

Hazard Description

“Extreme heat,” sometimes called “heat wave,” is to some extent a relative term describing a period when weather conditions include temperatures and humidity significantly higher than those usual for a particular geographic area. The NWS issues alerts to the public based on its Heat Index (HI), which takes both temperature and humidity into account (see Figure 3.1). The NWS will initiate alert procedures when the HI is expected to exceed 105°F to 110°F (depending on local climate) for at least two consecutive days. The effects of extreme heat are often exacerbated in large urban areas due to the heat island effect and because stagnant atmospheric conditions may trap pollutants. Extreme heat conditions are not common to Idaho where, in general, humidity is low and weather patterns vary.⁵

Historical Frequencies

The record high for Twin Falls County is 110°F in the City of Twin Falls on July 10, 2003. The record high for Castleford is 105°F, which occurred on July 14, 1978. The record high temperature for the Buhl district was 106°F, occurring on July 24, 2003.

Because humidity has a rather large effect on the NWS HI, temperature and humidity data from the Twin Falls Airport were used to calculate the maximum HI for Twin Falls, Idaho. The annual maximum temperature in Twin Falls County ranges from 100°F to 110°F; however, because of the low relative humidity, the HI temperature is usually lower than the actual temperature. Table 3.1 shows the results of the HI analysis. Because exposure to full sunshine can increase the HI values by up to 15°F⁶, the adapted temperature increases the HI by 15°F.

NOAA's National Weather Service Heat Index

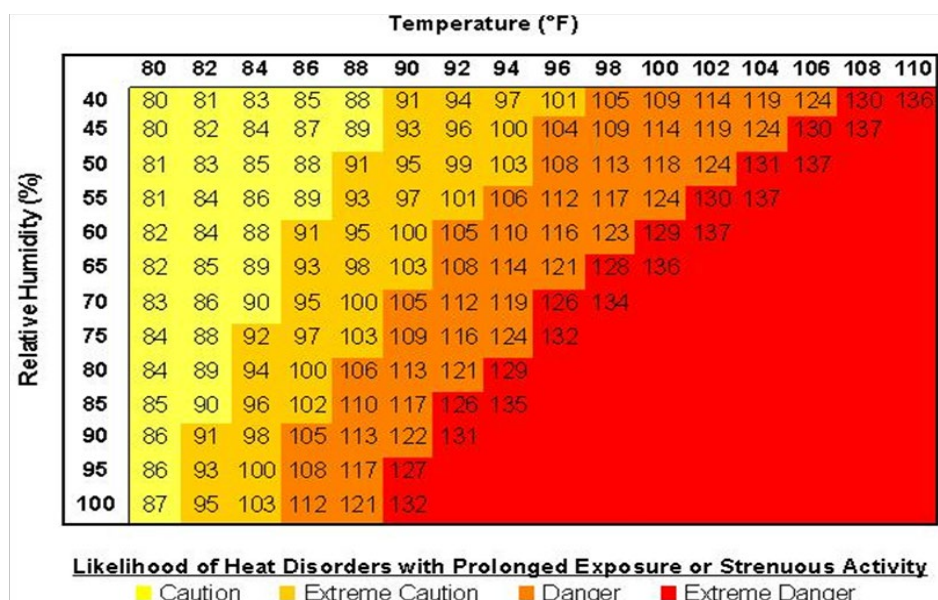


Figure 3.1. National Weather Service Heat Index Chart

⁵ http://www.nws.noaa.gov/om/brochures/heat_wave.shtml

⁶ <http://www.weatherimages.org/data/heatindex.html>

Table 3.1. Annual Maximum Temperatures

Year	Annual Maximum Temperature (F°)	Heat Index (F°)	Adapted Heat Index (F°)
1998	104	95	110
1999	99	91	106
2000	101	92	107
2001	101	92	107
2002	106	97	112
2003	107	97	112
2004	98	89	104
2005	100	91	106
2006	103	94	109
2007	105	96	111
2008	101	92	107
2009	101	92	107
2010	100	91	106
2011	99	90	105
2012	101	92	107
2013	103	94	109
2014	104	95	110
2015	102	93	108
2016	99	91	106
2017	99	91	106
2018	100	92	107

Impacts

The primary impact of extreme heat is on human health, which can cause such disorders as sunstroke, heat exhaustion, and heat cramps. Particularly susceptible are the elderly, small children, and persons with chronic illnesses. There are also undoubtedly indirect and chronic health effects from extreme heat, the magnitude of which is difficult or impossible to estimate. Environmental effects can include loss of wildlife and vegetation and increased probability of wildfires.

Based on climRR, it is anticipated that the average temperature in the county will increase by 3°F while the average minimum temperature is anticipated to increase by 3.6°F. Increased temperatures can increase the instances of extreme heat on the public, adversely impacting vulnerable populations, specifically elderly and sick people.

Increased populations will not affect the impact of extreme heat, however, emergency services and power grids can be stressed as populations increase.

Loss Estimates

Extreme heat places high demands on electrical power supplies that can lead to blackouts or brownouts. Economic impacts result from such factors as increased energy prices, loss of business (as people avoid leaving their homes to avoid the heat), and agricultural losses. The magnitude of these, and other more indirect impacts, is difficult to assess; however, losses resulting from severe heat waves have been estimated to be in the billions to hundreds of billions of dollars.

Lightning

Hazard Description

Lightning is defined by the NWS as: “A visible electrical discharge produced by a thunderstorm. The discharge may occur within or between clouds, between the cloud and air, between a cloud and the ground, or between the ground and a cloud.” A lightning discharge may be over 5 miles in length, generate temperatures upwards of 50,000°F, and carry 50,000 volts of electrical potential. Lightning is most often associated with thunderstorm clouds; however, lightning can strike as far as 5 to 10 miles from a storm. Thunder is caused by the rapid expansion of air heated by a lightning strike. Cloud-to-ground lightning strikes occur with much less frequency in the northwestern U.S. than in other parts of the country. Figure 3.2 demonstrates lightning flash density across the United States.

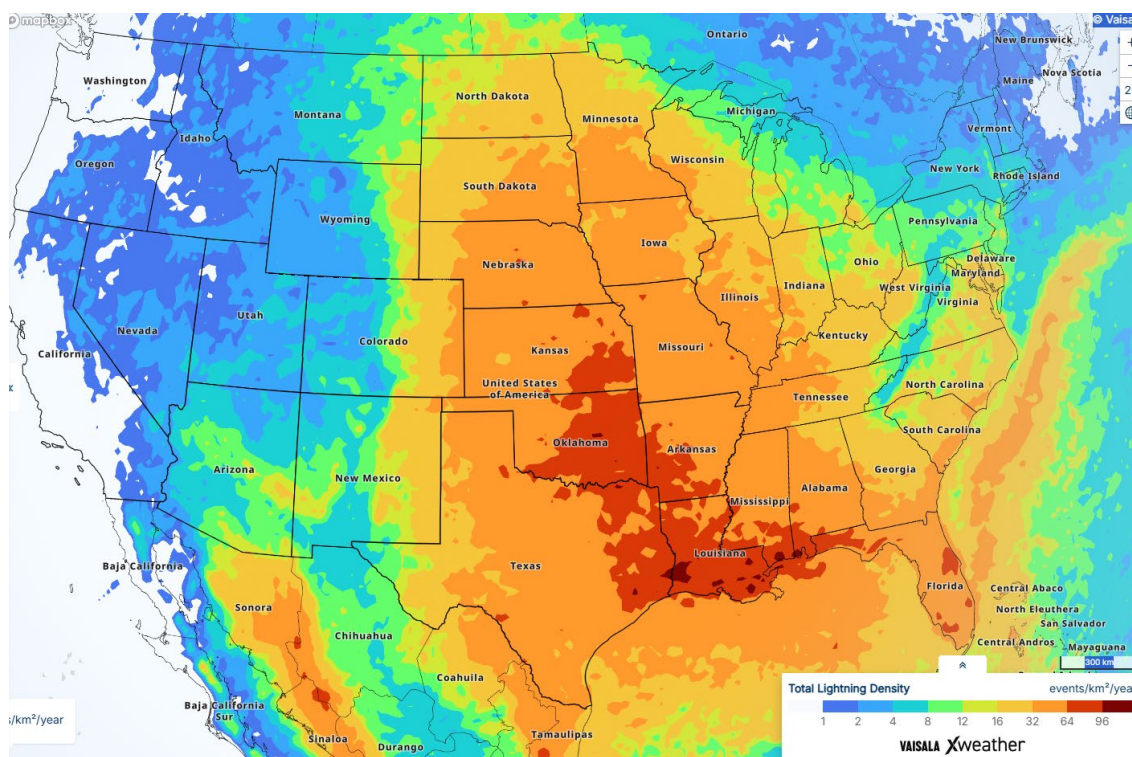


Figure 3.2. Lightning Flash Density.

Historical Frequencies

No bodily harm or economic loss has been reported in Twin Falls County in recent history. The most significant damage caused by lightning is the starting of wildfires. Those effects are discussed in the wildfire section of this HMP.

Weather data indicate that lightning occurs frequently in Twin Falls County, although strikes affecting the public are relatively rare. As can be seen in Table 3.2, however, there have been fatalities and property loss in the county due to lightning and the potential for such events is always present during thunderstorms.

Table 3.2. Twin Falls County Historical Lightning Events

Place	Date	Time	Event	Magnitude/details
Hollister	May 23, 1911	unknown	Lightning	One fatality
Filer	June 4, 1913	unknown	Lightning	Struck a house, one fatality
Twin Falls County	July 22, 1913	unknown	Lightning	One fatality, destroyed haystacks and killed several horses
Twin Falls County	June 18, 1918	unknown	Lightning	Struck a house, no fatalities
Twin Falls County	July 23, 1923	unknown	Lightning	Struck a home and burned to ground
Rogerson	July 29, 1942	unknown	Lightning	Started fire
Buhl	July 30, 1946	unknown	Lightning	Power outages, struck and killed seven cows
Twin Falls County	May 19, 1962	unknown	Lightning	Struck irrigation pump

Impacts

Lightning is the second most deadly weather phenomenon in the United States, being second only to floods. On average, 60 to 70 deaths per year are attributed to lightning nationally. In Idaho, the average is less than one per year. Despite the enormous energy carried by lightning, only about 10% of strikes are fatal. Injuries include central nervous system damage, burns, cardiac effects, hearing loss, and trauma. The effects of central nervous system injuries tend to be long-lasting and severe, leading to such disorders as depression, alcoholism, chronic fatigue, and in some cases to suicide. Lightning also strikes structures, causing fires and damaging electrical equipment. Wildland fires are often initiated by lightning strikes, as are petroleum storage tank fires. Approximately one-third of all power outages are lightning-related.

Climate changes can increase the severity of storms thus increasing the chance of lightning strikes. Climate change can also increase drought conditions, which increases the likelihood of a wildfire caused by a lightning strike.

Increased populations will not affect the impact of lightning; however, emergency services can be stressed as populations increase.

Vulnerable populations do not have increased susceptibility from lightning.

Loss Estimate

The magnitude of economic losses is difficult to estimate. Government figures suggest annual national costs at around \$30 million; however, some researchers find evidence that losses may be in the billions of dollars.

Lightning strikes occur with some regularity in Twin Falls County. Of special concern are the wide-open fields and metal farm equipment.

Hail

Hazard Description

The NWS definition of “hail” is, “Showery precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter, falling from a cumulonimbus cloud.” Its size can vary from the defined minimum, a little over a quarter of an inch, up to 4.5 inches or larger. “Severe hail” is defined as being 0.75 inches or more in diameter. The largest hailstones are formed in supercell thunderstorms because of their sustained updrafts and long duration. Hail and severe hail are relatively uncommon in Idaho. The NWS has recorded one severe hail event in the past 10 years.

Historical Frequencies

In any given year, there is a high likelihood that a severe hail event will occur that will cause damage either to personal property or agricultural crops. Damages range from broken windows to destroyed crops, with the costliest damages being to crops.

Hail events occur most frequently in the northern portion of the county, in the Snake River Plain crossing the Magic Valley. Storms also follow the US Highway 93 corridor down the center of the county into Nevada. The Magic Valley is the most populous area in the county, and the county’s major agricultural lands lie along the Snake River Plain and south across the central part of the county. Thus, both the population and the agricultural centers of Twin Falls County fall within the area most susceptible to major hailstorms.

Based on past events, hail is expected to occur every year.

Impacts

Deaths and injuries due to hail are rare but have occurred. No deaths have been reported in Twin Falls County.

Climate changes can increase the severity of storms thus increasing the chance or severity of hail storms. Hail may impact economically vulnerable groups by causing damage to structures or possessions that are costly to repair.

Increased populations will not affect the impacts of hail.

Loss Estimates

Economic loss can be extensive, especially to agriculturally based economies. Hail is very damaging to crops. Severe hail may cause extensive property damage, including damage to vehicle paint and bodywork, glass, shingles and roofs, plastic surfaces, etc. Hail loss nationally is estimated at over \$1 billion annually. Twin Falls County has only had two incidents where monetary losses were reported totaling \$8,000 (see Table 3.3).

Table 3.3. Reported Hail Storm Events with Damage

Place	Date	Event	Magnitude	Reported Damage
Twin Falls County	8/4/1991	Hail	0.75 in.	Unknown
Twin Falls City	3/17/1993	Hail	0.75 in.	Unknown
Twin Falls County	10/11/1994	Hail	Unknown	Unknown
Rogerson, Murtaugh	6/13/1996	Hail	1.00 in.	Unknown
Rogerson	6/27/1996	Hail	0.75 in.	Unknown
Kimberly	5/31/1997	Hail	0.75 in.	Unknown
Twin Falls Airport	8/7/1997	Hail	0.75 in.	Unknown
Hollister	8/12/1997	Hail	0.75 in.	Unknown
Rogerson	9/6/1997	Hail	1.25 in.	Unknown
City of Buhl	5/16/1998	Hail	0.75 in.	Unknown
Twin Falls City	6/25/1998	Hail	1.00 in.	Unknown
Twin Falls City	8/9/1998	Hail	0.88 in.	Unknown
Hollister	6/29/2004	Hail	1.00 in.	Unknown
City of Buhl	5/5/2005	Hail	0.75 in.	\$5,000
Rogerson	5/29/2005	Hail	0.75 in.	\$3,000
Twin Falls City	6/25/2005	Hail	0.75 in.	Unknown
Hollister	6/8/2006	Hail	0.88 in.	Unknown
Twin Falls City	7/6/2006	Hail	0.88 in.	Unknown
Filer	5/28/2008	Hail	1.00 in.	Unknown
Amsterdam	7/22/2008	Hail	0.75 in.	Unknown
Twin Falls	6/5/2009	Hail	0.88 in.	Unknown
Twin Falls Airport	7/5/2009	Hail	0.75 in.	Unknown
Twin Falls	7/5/2009	Hail	0.75 in.	Unknown
Hansen	9/01/2012	Hail	1.25 in.	Unknown
Filer	9/04/2013	Hail	1.00 in.	Unknown
Rock Creek	7/21/2014	Hail	1.00 in.	Unknown
Castleford	8/21/2014	Hail	1.75 in.	Unknown
Twin Falls	8/22/2014	Hail	1.00 in.	Unknown
Kimberly	5/31/2015	Hail	1.00 in.	Unknown
Rogerson	6/01/2015	Hail	1.00 in.	Unknown
Murtaugh	5/30/2018	Hail	1.25 in.	Unknown
Berger	9/9/2019	Hail	1.25 in.	Unknown
Berger	9/9/2019	Hail	1.00 in.	Unknown
Twin Falls Airport	9/9/2019	Hail	1.00 in.	Unknown
Hansen	9/9/2019	Hail	1.50 in.	Unknown
Amsterdam	5/25/2023	Hail	1.00 in.	Unknown
Hollister	5/26/2023	Hail	1.00 in.	Unknown
Hollister	5/26/2023	Hail	1.00 in.	Unknown

Tornado

Hazard Description

The NWS describes a tornado as, "...a violently rotating column of air, usually pendant to a cumulonimbus, with circulation reaching the ground. It nearly always starts as a funnel cloud and may be accompanied by a loud roaring noise. On a local scale, it is the most destructive of all atmospheric phenomena." Like hail, most tornadoes are spawned by supercell thunderstorms. They usually last only a few minutes, although some have lasted more than an hour and traveled several miles. Wind speeds within tornadoes are estimated based on the damage caused and expressed using the Fujita Scale, as defined in Table 3.4.

Table 3.4. Fujita Scale

Scale (F-number)	Wind Estimate	Typical Damage
F0	<73	<u>Light Damage</u> . Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
F1	73-112	<u>Moderate Damage</u> . Peels surface off roofs; mobile homes pushed off foundations or overturned; moving automobiles blown off roads.
F2	113-157	<u>Considerable Damage</u> . Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
F3	158-206	<u>Sever Damage</u> . Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest unrooted; heavy cars lifted off the ground and thrown.
F4	207-260	<u>Devastating Damage</u> . Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
F5	261-318	<u>Incredible Damage</u> . Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yards); trees debarked; incredible phenomena will occur.

Idaho has relatively few tornadoes, averaging three reported per year. Tornadoes of F2 strength or greater (Table 3.4) are extremely rare in Idaho.

Historical Frequencies

According the NWS Storm Event Database, Twin Falls County has experienced 20 tornadoes since 1930 (Table 3.5). Three of those tornadoes were magnitude F1 on the Fujita Scale. Those three events caused an estimated \$28,000 in damage. Of the remaining, six tornadoes registered F0 on the Fujita Scale and caused little to no damage. It is assumed a tornado will occur every 4.75 years.

Table 3.5. Twin Falls County Historical Tornado Events

Place	Date	Time	Event	Magnitude	Reported Damage
Twin Falls County	9/08/1930	Unknown	Tornado	UNK	Unknown
Twin Falls County	6/5/1957	3:45 PM	Tornado	F1	Unknown
Twin Falls County	9/8/1985	6:00 PM	Tornado	F1	\$25,000
Twin Falls County	6/24/1986	9:00 PM	Tornado	F1	\$3,000
Twin Falls County	4/20/1990	2:24 PM	Tornado	F0	Unknown
Twin Falls County	9/3/1990	3:15 PM	Tornado	F0	Unknown
Twin Falls County	9/10/1991	3:00 PM	Tornado	F0	Unknown
Twin Falls City	3/17/1993	6:00 PM	Tornado	F0	Unknown
Twin Falls County	3/17/1993	7:14 PM	Tornado	F0	Unknown
Twin Falls County	5/15/1993	2:45 PM	Funnel Cloud	NA	Unknown
Twin Falls County	8/11/1993	2:00 PM	Funnel Cloud	NA	Unknown
Twin Falls County	6/9/1995	2:45 PM	Funnel Cloud	NA	Unknown
Twin Falls County	6/12/1997	5:45 PM	Funnel Cloud	NA	Unknown
City of Buhl	5/12/1998	1:45 PM	Tornado	F0	Unknown
Twin Falls	6/10/1998	11:13 AM	Funnel Cloud	NA	Unknown
Twin Falls	7/22/2008	1:30 PM	Tornado	NA	Unknown
Twin Falls	3/16/2011	3:00 PM	Tornado	NA	Unknown
Twin Falls	3/6/2014	6:42 PM	Funnel Cloud	NA	Unknown
Murtaugh	9/4/2016	2:50 PM	Funnel Cloud	NA	Unknown
Kimberly	5/7/2019	3:00 PM	Tornado	F0	Unknown

Impacts

Loss of utilities (primarily due to fallen trees) is common following tornadoes and, depending on circumstances, communities might be deprived of almost any kind of goods and services, including food, water, and medical care. Agriculturally, crop and livestock losses are also possible, as is loss of timber production.

Climate change can increase the severity of storms and frequency thus increasing the likelihood of tornado occurrences.

Increased populations will not affect the impact of tornados, however, additional utilities, such as powerlines may be impacted during a tornado.

Loss Estimates

Since 1930, Twin Falls County has experienced 12 tornados, with reported losses totaling \$28,000 (Table 3.5). Only two tornados were reported to have created a property loss.

Historically, tornadoes are rare in Twin Falls County and, when they do occur, are not severe. They do, however, occur most frequently in the county's most highly populated areas.

Straight Line Wind

Hazard Description

The term “straight line wind” is used to describe any wind not associated with rotation, particularly tornadoes. Of concern is “high wind,” defined by the NWS as: “...sustained wind speeds of 40 miles per hour (mph) or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration.” Like tornadoes, strong, straight line winds are generated by thunderstorms and can cause similar damage. Straight line wind speeds can approach 150 mph, equivalent to those in an F3 tornado.

Historical Frequencies

Table 3.6 lists high wind events in Twin Falls County. The winds follow the Snake River Plain and extend south following US Hwy 93 into Nevada. Again, these are the most populous and heavily farmed areas in the county.

High wind events are expected to occur 3-4 times per year.

Table 3.6. Wind Events

Place	Date	Event	Magnitude	Estimated Damage
Twin Falls County	3/4/1991	Thunderstorm Winds	60 kts.	\$0.00
Twin Falls County	8/4/1991	Thunderstorm Winds	55 kts.	\$0.00
Twin Falls County	8/27/1991	Thunderstorm Winds	Unknown	\$0.00
Twin Falls County	9/10/1991	Thunderstorm Winds	Unknown	\$0.00
Twin Falls County	4/17/1992	Thunderstorm Winds	60 kts.	\$0.00
Twin Falls County	4/17/1992	Thunderstorm Winds	52 kts.	\$0.00
Twin Falls County	4/17/1992	Thunderstorm Winds	Unknown	\$0.00
Twin Falls County	4/17/1992	Thunderstorm Winds	Unknown	\$0.00
Kimberly	3/17/1993	Thunderstorm Winds	Unknown	\$500,000
Twin Falls County	3/17/1993	Thunderstorm Winds	Unknown	\$5,000
Twin Falls County	5/3/1993	Thunderstorm Winds	Unknown	\$50,000
Twin Falls County	5/3/1993	Thunderstorm Winds	53 kts.	\$0.00
Twin Falls County	5/6/1994	Thunderstorm Winds	Unknown	\$500,000
Hollister	6/13/1996	Thunderstorm Winds	60 kts.	\$0.00
Filer	7/16/1996	Thunderstorm Winds	60 kts.	\$15,000
Twin Falls City	7/16/1996	Thunderstorm Winds	60 kts.	\$50,000
Filer	7/7/1998	Thunderstorm Winds	50 kts.	\$25,000
Filer	7/30/1998	Thunderstorm Winds	61 kts.	\$200,000
South TF County	2/14/2000	High Wind	74 kts.	\$0.00
Twin Falls City	8/4/2000	Thunderstorm Winds	60 kts.	\$0.00
Twin Falls Airport	6/26/2002	Thunderstorm Winds	53 kts.	\$0.00

Table 3.6. (continued)

Place	Date	Event	Magnitude	Estimated Damage
Rogerson	7/14/2002	Thunderstorm Winds	50 kts.	\$0.00
Kimberly	8/22/2003	Thunderstorm Winds	60 kts.	\$0.00
South TF County	6/13/2006	High Wind	54 kts	\$.00
Hollister	8/6/2006	Thunderstorm Winds	52 kts.	\$0.00
Twin Falls	3/29/2009	High Wind	Unknown	\$35,034
Twin Falls	12/30/2011	Thunderstorm Winds	59 kts.	\$0.00
Twin Falls	10/16/2012	Thunderstorm Winds	61 kts.	\$0.00
Twin Falls	7/04/2013	Thunderstorm Winds	52 kts.	\$0.00
Twin Falls	8/25/2013	Thunderstorm Winds	60 kts.	\$0.00
Filer	9/04/2013	Thunderstorm Winds	52 kts.	\$0.00
Rock Creek	8/13/2014	Thunderstorm Winds	71 kts.	\$0.00
Rogerson	6/11/2017	Thunderstorm Winds	52 kts.	\$0.00
Rogerson	7/15/2017	Thunderstorm Winds	52 kts.	\$0.00
Twin Falls	10/19/2019	Thunderstorm Wind	51 kts.	\$0.00
Twin Falls	10/19/2019	Thunderstorm Wind	56 kts.	\$0.00
Mc Millan	10/19/2019	Thunderstorm Wind	58 kts.	\$0.00
Twin Falls	2/23/2020	High Wind	56 kts.	\$0.00
Twin Falls	9/7/2020	High Wind	56 kts.	\$0.00
Western Magic Valley	2/26/2021	High Wind	52 kts.	\$0.00
Western Magic Valley	3/06/2021	High Wind	51 kts	\$0.00
Western Magic Valley	3/29/2021	High Wind	61 kts	\$0.00
Twin Falls Airport	6/22/2021	Thunderstorm Wind	51 kts	\$0.00
Cedar	8/16/2021	Thunderstorm Wind	65 kts	\$0.00
Southern Twin Falls	4/11/2022	High Wind	62 kts	\$0.00
Southern Twin Falls	11/06/2022	Strong Wind	43 kts	\$0.00
Southern Twin Falls	11/07/2022	High Wind	53 kts	\$0.00
Southern Twin Falls	12/21/2022	Strong Wind	44 kts	\$0.00
Southern Twin Falls	12/21/2022	Strong Wind	36 kts	\$0.00
Western Magic Valley	3/15/2023	High Wind	52 kts	\$0.00
Southern Twin Falls	3/15/2023	High Wind	56 kts	\$0.00
Southern Twin Falls	5/25/2023	Thunderstorm Wind	52 kts	\$0.00
Amsterdam	5/25/2023	High Wind	52 kts	\$0.00
Southern Twin Falls	8/21/2023	High Wind	50 kts	\$0.00
Southern Twin Falls	11/19/2023	High Wind	52 kts	\$0.00

Table 3.6. (continued)

Place	Date	Event	Magnitude	Estimated Damage
Western Magic Valley	11/19/2023	High Wind	52 kts	\$0.00
Southern Twin Falls	11/19/2023	Strong Wind	43 kts	\$0.00
Western Magic Valley	1/11/2024	High Wind	52 kts	\$0.00
Filer	5/10/2025	Thunderstorm Wind	56 kts	\$0.00
Twin Falls	5/11/2025	Thunderstorm Wind	53 kts	\$0.00
Hollister	5/11/2025	Thunderstorm Wind	50 kts	\$0.00
Southern Twin Falls	5/18/2025	High Wind	55 kts	\$0.00

Impacts

The impacts of straight-line winds are virtually the same as those from tornadoes with similar wind speeds. The damage is distinguishable from that of a tornado only in that the debris is generally deposited in nearly parallel rows. Downbursts are particularly hazardous to aircraft in flight.

Straight line wind events have occurred in nearly every part of the county but are most frequent in the Snake River Plain and along the US Highway 93 corridor. Heavy damages have occurred in some instances, and it is likely that smaller, unreported losses are often sustained.

Agricultural land maintenance practices make dust storms likely during the spring and fall. These are particularly hazardous to traffic on US Highway 93.

The Hansen and Twin Falls bridges spanning the Snake River Canyon are routinely affected by high wind gusts resulting from the wind tunnel effect of the canyon. High profile vehicles (i.e., tractor-trailers) have been blown over on these bridges during intense windstorms.

Climate change can increase the severity of storms and frequency thus increasing the likelihood of high wind occurrences.

Increased populations will not affect the impact of winds, however, additional utilities, such as powerlines may be impacted during a high wind event. High winds can also increase the spread of wildfires and increase drought conditions.

Loss Estimates

Historically, the majority of damage has affected outlying buildings and crops, with losses ranging from \$15,000 to \$500,000 (Table 3.6). It should be noted that losses reported in the NWS database are most likely seriously underreported, primarily because property owners fail to report minor damages. Given the frequency of high straight-line wind events, these minor damages undoubtedly add up to a much larger sum. Thus, the impact of severe wind events most likely greatly exceeds the total reported losses.

Repetitive Loss – There is repetitive loss annually due to straight line winds in Twin Falls County. The loss is primary to out buildings and fences. Siding is at times removed from homes and businesses. Top soil is lost in the spring, especially during the planting season where the soil is loose and little moisture is present.

Extreme Cold

Hazard Description

“Extreme cold” is another of the terms describing hazards that must be defined relative to what is considered normal in a given locale. What might be considered extreme cold varies considerably in the State of Idaho where normal winter temperatures in the southwest are appreciably more moderate than those in the northwest and far north. Very cold temperatures become a particular hazard when accompanied by winds of 10 mph or greater. The NWS has developed a formula for calculating “wind chill” based on temperature and wind speed (see Figure 3.3). In this region, the NWS issues wind chill advisories when the wind chill temperatures are predicted to be -10°F or less with winds of 10 mph or higher for 1 hour or more. Wind chill warnings are issued when wind chill temperatures will be -20°F or less with winds of 10 mph or higher for 1 hour or more. As with extreme heat, extreme cold is of greatest concern when the condition persists for an extended period of time.

Historical Frequencies

Cold events occur yearly in Twin Falls. Wind chill drives temperatures down as well. Although there are no recorded extreme cold/wind-chill events, several events have been recorded in surrounding counties.

Table 3.7 details the annual minimum temperatures since 1980.

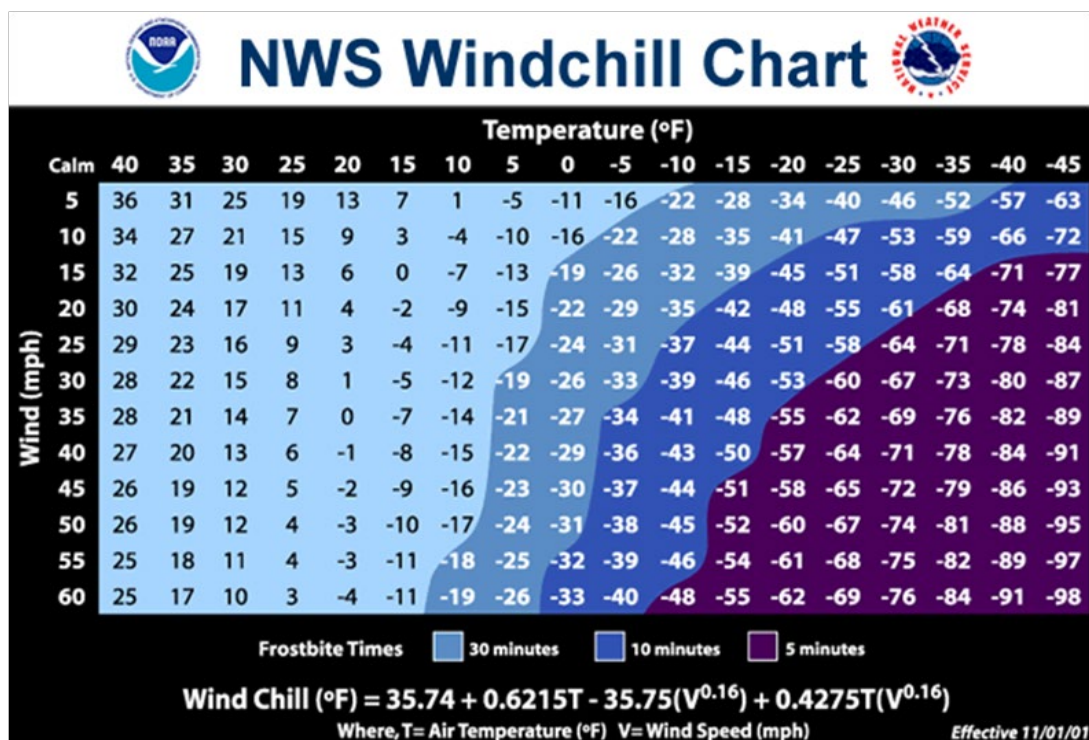


Figure 3.3. National Weather Service Windchill Chart (<http://www.weather.gov/om/windchill/index.shtml>)

Table 3.7. Annual Minimum Temperatures

Year	Annual Minimum Temperature (°F)
1980	35.6
1990	34.8
2000	38.3
2010	38.9
2020	38.1
2021	39.6
2022	36.9
2023	37.7
2024	39.1

Impacts

Health effects of exposure to extreme cold include hypothermia and frostbite, both of which can be life-threatening. Infants and the elderly are most susceptible. In the United States, nearly 700 deaths are directly attributed to hypothermia annually.

Extreme cold may cause loss of wildlife and vegetation and kill livestock and other domestic animals. Economic loss may result from flooding due to burst pipes, large demands on energy resources, and diminished business activity. River flooding may take place as a result of the formation of ice jams.

Extreme cold affects the individual, families, cities, and the county. Damage typically occurs to individual properties; however, city water systems are usually vulnerable to extreme cold. Repairs to water line freeze ups and breaks typically require the roadways to be excavated, necessitating additional maintenance and repairs during the warmer months. As demonstrated in the historical frequencies section discussed above, areas of the county can expect as much as 20 to 25 degrees difference, depending on elevation.

Extreme cold can cause death and injury especially to those working or stranded outside for prolonged periods. Economic loss is related to private individuals, businesses, and government agencies in heating of homes and facilities. Additional losses can be expected to the livestock industry. During extreme cold periods, the schools are closed to protect children traveling to and from school.

Overall, the economic losses are variable, and, depending on the time of year, agricultural, industrial, and commercial damages may occur. Because of this variability, an estimate average sum for an extreme cold event is anticipated to be in the thousands of dollars.

Low economic groups, and elderly are especially vulnerable to extreme cold. They can be left without proper shelter or finances to pay for heating costs.

Increased populations will not affect the impact of extreme cold, however, emergency services and power grids can be stressed as populations increase.

Based on climRR, the number of cooling days will increase as climate change impacts are felt. The number of cooling days is projected to increase by 368 days over the next half-century. Increased cooling days has the potential to negatively impact agriculture in the area.

Loss Estimates

During the spring, summer, and fall, temperatures can drop low enough to produce frost. While such temperatures are not low enough to damage infrastructure or require extra heating costs, it can be devastating to crops.

Warning lead times in Twin Falls County usually are approximately 1 to 2 days based on forecasts made by the NWS in Boise, ID.

Winter Storm

Hazard Description

The NWS describes “Winter Storm” as weather conditions that produce heavy snow or significant ice accumulations. For purposes of this analysis, Severe Winter Storm is defined as any winter condition where the potential exists for a blizzard (i.e., winds ≥ 35 mph and falling/drifting snow frequently reduce visibility $< \frac{1}{4}$ mile, for 2 hours or more), heavy snowfall (i.e., valleys 6 inches or more snowfall in 24 hours; mountains 9 inches or more snowfall in 24 hours), ice storm, and/or strong winds.

Historical Frequencies

Severe winter weather in Twin Falls County is infrequent; however, weather conditions can be extremely hazardous in the outlying areas due to blowing and drifting snow. While snow levels are usually not extreme, blizzard conditions (i.e., snow, high winds, and freezing temperatures) are not infrequent in Twin Falls County (Table 3.8) and can be extremely hazardous. Based on past occurrences, a severe winter storm is expected to occur every 1.5 years.

Table 3.8. Twin Falls County Historical Winter Storm Events

Place	Date	Magnitude/details
Twin Falls County	Jan 22, 1999	Winter storm with heavy snow throughout southeast Idaho, 3-5 inches fell in Southern Twin Falls County.
Twin Falls County	Feb 9, 1999	Freezing rain, light snow, and gusty winds produced hazardous driving conditions in southern Twin Falls County. About 30 minor accidents and slide-offs occurred and authorities had to close I-84 for a few hours.
Twin Falls County	Dec 1, 1999	Winter storm moving from the North Pacific across Oregon brought 3-4 inches of snow to southern Twin Falls County.
Twin Falls County	Jan 20, 2002	Winter storm with 3-6 inches of snow in southern Twin Falls County.
Twin Falls County	Dec 28-29, 2003	A major winter storm through southwest Idaho with 6-12 inches of new snow. Strong winds caused blowing and drifting.
Twin Falls County	Feb 26, 2004	Winter storm moving north from Nevada brought 7 inches of snow to southern Twin Falls County.
Twin Falls County	Jan 8, 2005	11 inches of snow fell on southern Twin Falls County. The trailing cold front caused strong winds along the Snake River.
Twin Falls County	April 20, 2005	8-12 inches of snow fell behind a cold front.
Twin Falls County	Dec 20, 2005	Winter storm with heavy snow.
Twin Falls County	Dec 21, 2006	Winter storm with heavy snow.
Twin Falls County	Feb 27, 2007	Winter storm with 4-5 inches of snow in southern Twin Falls County.

Table 3.8. (continued)

Place	Date	Magnitude/details
Twin Falls County	Mar 27, 2007	Winter storm.
Twin Falls County	Nov 23, 2010	Blizzard. 5-10 inches of new snow and drifting. Area roads closed.
Twin Falls County	Jan 10, 2013	Blizzard. Blowing winds reducing visibility to ¼ mile. Drifts up to 5 feet.
Twin Falls County	Feb 23, 2013	Blizzard. Snow squalls and high winds. Damage to trees and power lines.
Twin Falls County	Dec 1, 2014	Snow and freezing rain.
Twin Falls County	Feb 5, 2017	Severe winter weather. DR-4310. Extreme snow led to flooding.

Impacts

The impacts of the very cold temperatures that may accompany a severe winter storm are discussed above. Other life-threatening impacts are numerous. For example, motorists may be stranded by road closures or may be trapped in their automobiles in heavy snow and/or low visibility conditions. Bad road conditions cause automobiles to go out of control. People can be trapped in homes or buildings for long periods of time without food, heat, and utilities. Those who are ill may be deprived of medical care by being stranded or through loss of utilities and lack of personnel at care facilities. Use of heaters in automobiles and buildings by those who are stranded may result in fires or carbon monoxide poisoning. Fires during winter storm conditions are a particular hazard because fire service response is hindered or prevented by road conditions and because water supplies may be frozen. Disaster services may also not be available if telephone service is lost. People who attempt to walk to safety through winter storm conditions often become disoriented and lost. Downed power lines not only deprive the community of electricity for heat and light but pose an electrocution hazard. Death and injury may also occur if heavy snow accumulation causes roofs to collapse.

Climate change may increase the severity of severe storms increasing the damage to property and increased risk to public safety.

Increased populations will not affect the impact of winter storms, however, emergency services and power grids can be stressed as populations increase. Over congestion in areas can lead to decreased emergency response time.

Low economic groups, and elderly are especially vulnerable to winter storms. They can be left without proper shelter or finances to pay for heating costs.

Loss Estimate

Economic impacts arise from numerous sources, including hindered transportation of goods and services; flooding due to burst water pipes; forced closing of businesses; inability of employees to reach the workplace; damage to homes and structures, automobiles, and other belongings by downed trees and branches; and loss of livestock and vegetation.

Drought

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		High	
Impact/Consequence:		High	
Community Vulnerability:		Medium	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
High	High	High	High
Kimberly	Hansen	Murtaugh	Hollister
High	High	High	High

Hazard Description

Drought is an expected phase in the climactic cycle of almost any geographical region, as is the case in the State of Idaho. Objective, quantitative definitions for drought exist but most authorities agree that because of the many factors contributing to it and because its onset and relief are slow and indistinct, none is entirely satisfactory. According to the National Drought Mitigation Center, drought “originates from a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector.” What is clear is that a condition perceived as “drought” in a given location is the result of a significant decrease in water supply relative to what is “normal” in that area.

It should be noted that water supply is not only controlled by precipitation (i.e., amount, frequency, and intensity) but also by other factors, including evaporation (which is increased by higher than normal heat and winds), transpiration (evaporation from foliage), and human use. According to the National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center, much of the State of Idaho most recently experienced moderate to extreme drought conditions from 2000 through 2005. Drought emergency declarations were issued for various counties by the IDWR in 2002 through 2005.

Drought risk is based on a combination of the frequency, severity, spatial extent of drought, and the degree to which a population or activity is vulnerable to the effects of drought. The degree of a region’s vulnerability depends on the environmental and social characteristics of the region and is measured by their ability to anticipate, cope with, resist, and recover from drought. Society’s vulnerability to drought is determined by a wide range of physical and social factors, such as demographic trends and geographic characteristics.

The following figures demonstrate various indices used to measure drought and impacts of drought, which include streamflow, rainfall, and evapotranspiration.

The Standard Precipitation Index (SPI) index utilizes monthly precipitation to determine accumulated water excess or deficit but has the advantage of being multi-scaler (i.e., computed over a range of time scales) (Figure 3.4).

The outlook of drought in the US is shown in Figure 3.5.

Monetary costs impacts from drought since 1980 are shown in Figure 3.6.

These indices do not take into account irrigated lands; therefore, the drought in the Twin Falls area is less severe than the figures indicate. The U.S. Drought Monitor map demonstrates drought levels at the start of the water year (Figure 3.7).

There were no State or Federal Disaster Declarations for drought since the last update.

Historical Frequencies

The IDWR reports that meteorological drought conditions existed in the state approximately 30% of the time during the period 1931-1982. The most prolonged drought in Idaho was during the 1930s. For most of the state, that drought lasted for 11 years (1929-41) despite greater than average stream flows in 1932 and 1938. A mild drought during 1959-61 occurred in southern and central Idaho. During the early 1960s, several areas in the state also experienced water shortages.

In 1977, the worst single year on record, a severe water shortage occurred throughout Idaho and the West. Area ski resorts were closed for much of the ski season. A lack of winter snowfall resulted in the lowest runoff of record at most gauges in the state. Irrigation ditches were closed well before the end of the growing season and crop yields were below normal. Domestic wells in the Big and Little Wood River basins became dry early in April 1977, and many shallow wells in six western Idaho counties became dry in June.

January through August 2025 was the driest year in Twin Falls county over the past 131 years according to the US Drought Monitor.

Stream flows were below normal from 1979 to 1981. From 1987 through 1992, water supplies were much below normal throughout the state. In southwestern and central Idaho, this 6-year drought was more severe than the 1930s drought. Low winter snowpack and prolonged periods of greater than average temperatures resulted in unseasonable early snow melt, high water demands, and the lowest stream flows since 1977.

Twin Falls County has received over 20 IDWR/state and USDA declarations since 2012, ranking among the highest in the state. The following USDA declaration have been made since 2020:

- 2020: S4921, S4925
- 2021 (S4992, S4993, S4997, S4998, S5000, S5002, S5004, S5014, S5019, S5022)
- 2022 (S5149, S5155, S5157, S5170, S5175, S5176, S5177)
- 2023 (S5375)
- 2025 (S5964, S6027, S6053)

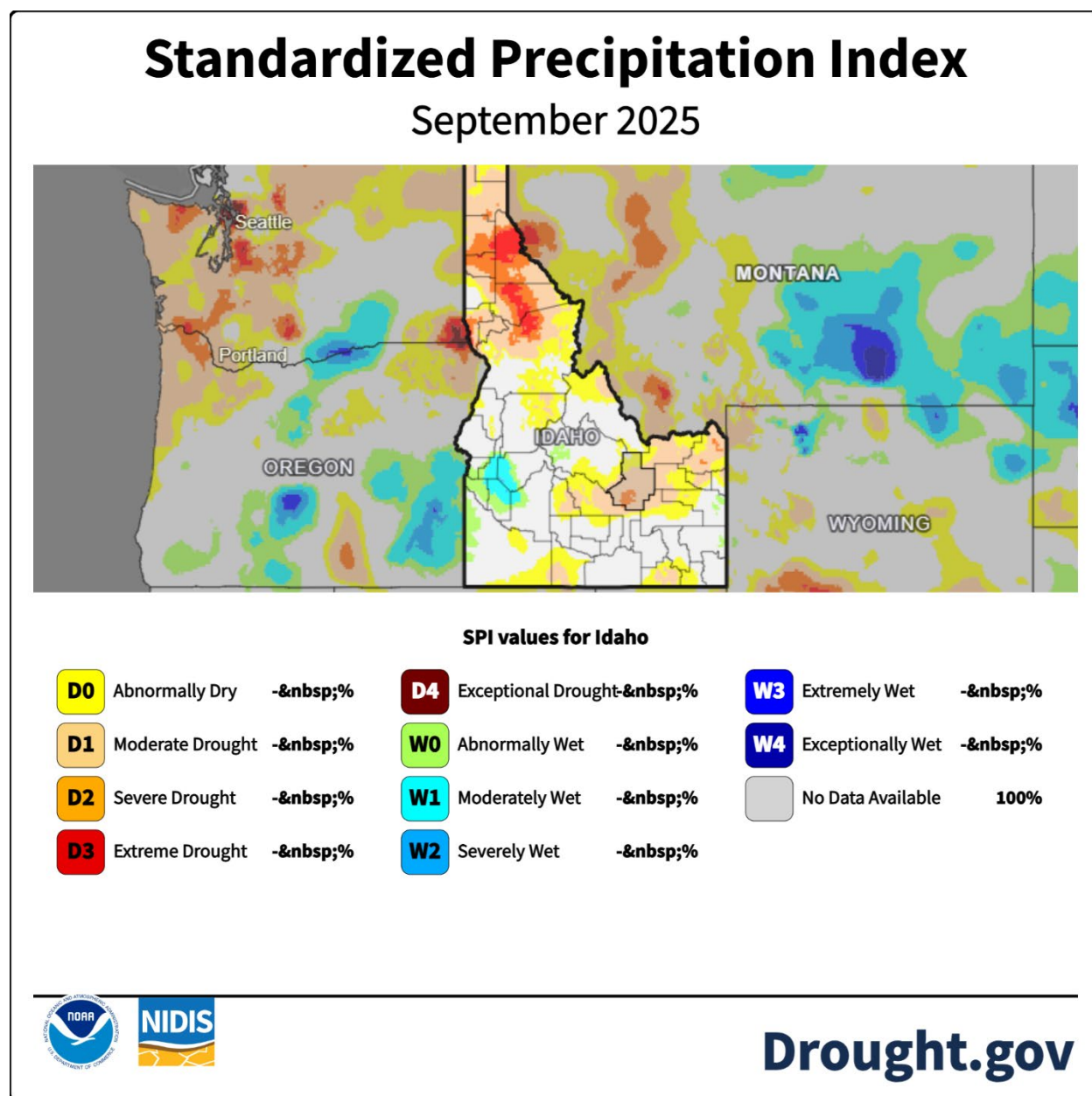


Figure 3.4. SPI for Idaho

U.S. Monthly Drought Outlook

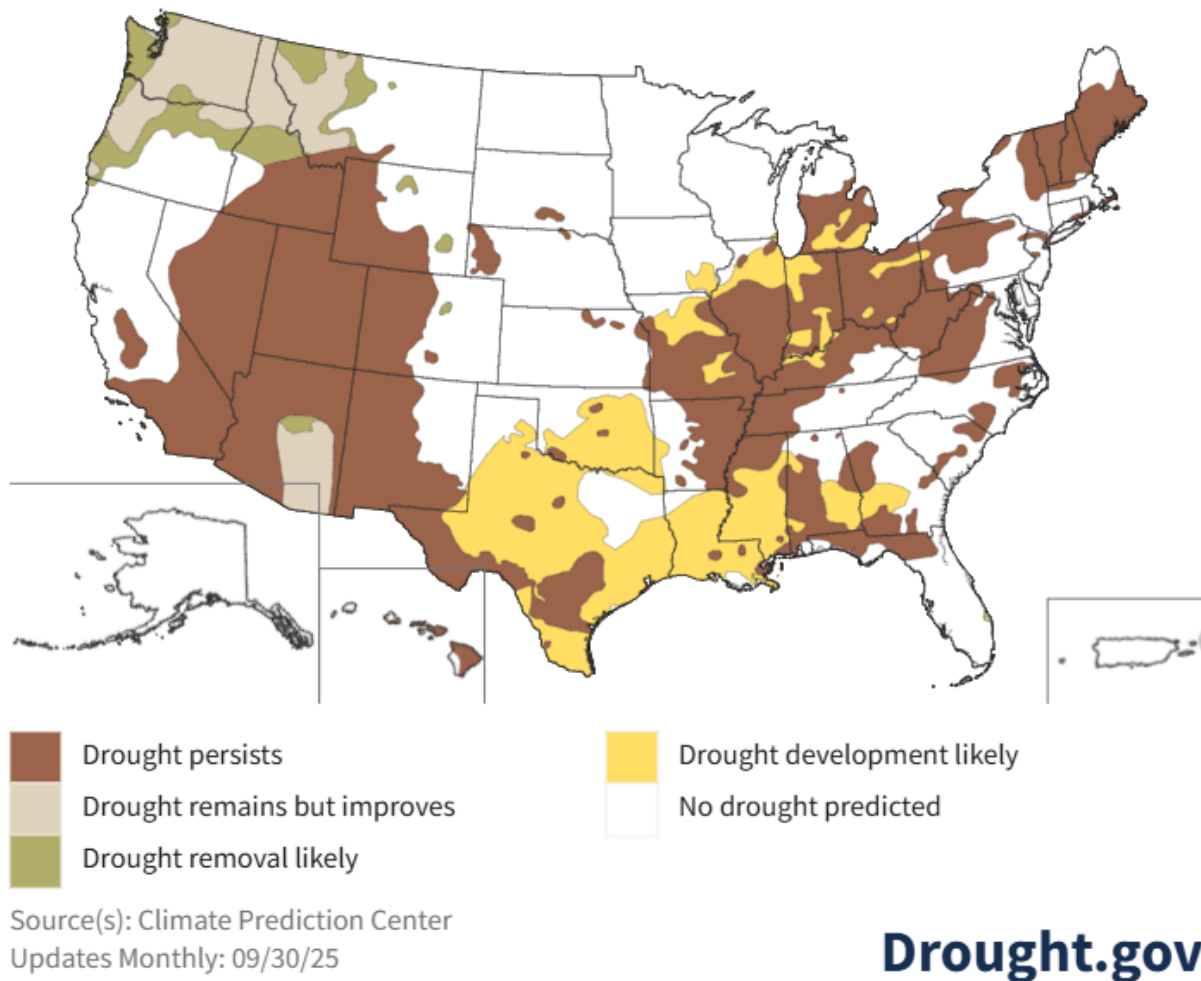
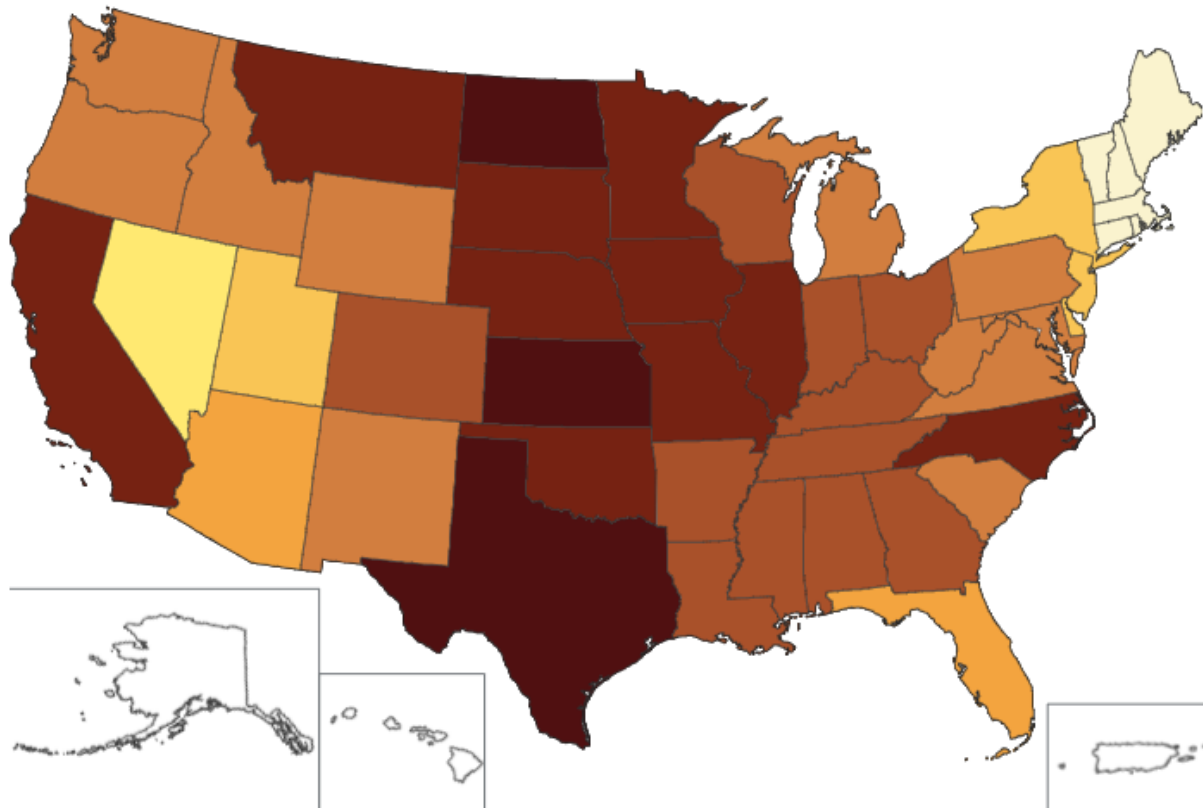
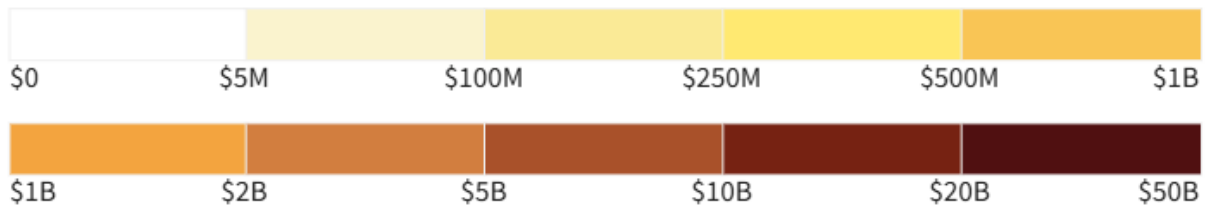


Figure 3.5. Drought Outlook

Cost of U.S. Billion-Dollar Drought Disasters Since 1980



Cost of Major Drought Events Since 1980

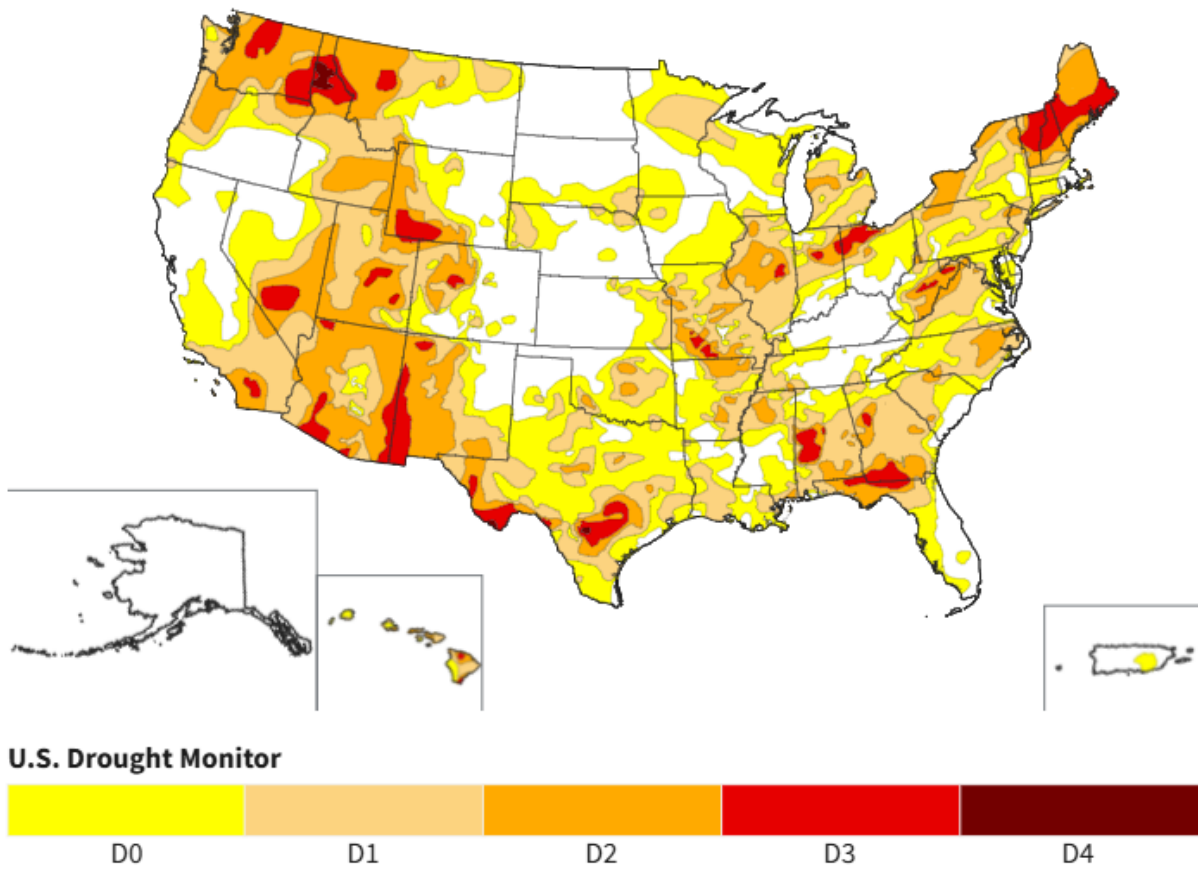


Source(s): National Centers for Environmental Information
Data Valid: 10/10/25

Drought.gov

Figure 3.6. Cost of Drought since 1980.

U.S. Drought Monitor



Source(s): NDMC, NOAA, USDA

Data Valid: 10/21/25

Drought.gov

Figure 3.7. U.S. Drought Monitor Map

Hazard Impacts

Hazard impacts are commonly referred to as direct or indirect. Reduced crop, rangeland, and forest productivity; increased fire hazard; reduced water levels; increased livestock and wildlife mortality rates; and damage to wildlife and fish habitat are a few examples of direct impacts. The consequences of these impacts illustrate indirect impacts. For example, a reduction in crop, rangeland, and forest productivity may result in reduced income for farmers and agribusiness, increased prices for food and timber, unemployment, reduced tax revenues because of reduced expenditures, increased crime, foreclosures on bank loans to farmers and businesses, migration, and disaster relief programs. Direct or primary impacts are usually biophysical. Conceptually speaking, the more removed the impact from the cause, the more complex the link to the cause. In fact, the web of impacts becomes so diffuse that it is very difficult to come up with financial estimates of damages. The impacts of drought can be categorized as economic, environmental, or social.

Many economic impacts occur in agricultural and related sectors because of the reliance of these sectors on surface and subsurface water supplies. In addition to obvious losses in yields in crop and livestock production, drought is associated with increases in insect infestations, plant disease, and wind erosion. Droughts also bring increased problems with insects and diseases to forests and reduced growth. The incidence of forest and range fires increases substantially during extended droughts, which in turn places both human and wildlife populations at higher levels of risk.

Loss Estimate

Income loss is another indicator used in assessing the impacts of drought because so many sectors are affected. Reduced income for farmers has a ripple effect. Retailers and others who provide goods and services to farmers face reduced business. This leads to unemployment, increased credit risk for financial institutions, capital shortfalls, and loss of tax revenue for local, State, and Federal government. Less discretionary income affects the recreation and tourism industries. Prices for food, energy, and other products increase as supplies are reduced. In some cases, local shortages of certain goods result in the need to import these goods from outside the stricken region. Reduced water supply impairs the navigability of rivers. Hydropower production may also be curtailed significantly.

Environmental losses are the result of damages to plant and animal species, wildlife habitat, and air and water quality; forest and range fires; degradation of landscape quality; loss of biodiversity; and soil erosion. Some of the effects are short-term and conditions quickly return to normal following the end of the drought. Other environmental effects linger for some time or may even become permanent. Wildlife habitat, for example, may be degraded through the loss of wetlands, lakes, and vegetation. However, many species will eventually recover from this temporary aberration. The degradation of landscape quality, including increased soil erosion, may lead to a more permanent loss of biological productivity of the landscape. Although environmental losses are difficult to quantify, growing public awareness and concern for environmental quality has forced public officials to focus greater attention and resources on these effects.

Social impacts mainly involve public safety, health, conflicts between water users, reduced quality of life, and inequalities in the distribution of impacts and disaster relief. Many of the impacts specified as economic and environmental have social components as well.

Hazard Evaluation

Drought and the related impacts are of serious concern to Twin Falls County. Over 97% of the county land is used for agricultural uses, including tillage and rangeland. The impacts due to drought in Twin Falls County are potentially significant, especially if the drought were to be protracted. While it is impossible to stop the occurrence of drought, the impacts can be mitigated through proper planning and management of water resources.

As discussed earlier, drought risk is based on a combination of the frequency, severity, spatial extent of drought (the physical nature of drought), and the degree to which a population or activity is vulnerable to the effects of drought. The degree of a region's vulnerability depends on the environmental and social characteristics of the region and is measured by their ability to anticipate, cope with, resist, and recover from drought. Society's vulnerability to drought is determined by a wide range of factors, both physical and social, such as demographic trends and geographic characteristics. Although the economy in Twin Falls County is diverse, it contains extensive agriculture ventures that can be adversely affected by drought conditions.

Twin Falls County and all the jurisdictions have large agriculture industries that could be greatly affected by a significant drought. An extreme and prolonged drought could result in limited availability of irrigation water causing severe crop losses throughout the country. This may also lead to increased reliance on drinking water resources to supplement drought conditions.

Climate change may impact drought by less precipitation throughout the state, increasing drought conditions, and making it harder to predict and precipitation and runoff events.

Increased drought could negatively affect surrounding agriculture resources leading to reduced quality of living conditions and increased poverty. Less surface water can also mean higher power rates as Idaho depends on hydroelectric power. Increased utility rates can increase the burden on economically vulnerable groups within the county.

Probability of Future Occurrence:

Based on past occurrences, the probability that another federal or state declared drought will occur in a given year is 90% with a drought expected to occur approximately every 1.15 years.

Repetitive Loss:

Drought occurs in cycles on the high desert plains of Idaho. The losses are significant and repetitive.

Flooding (River, Flash)

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		Medium	
Impact/Consequence:		Medium	
Community Vulnerability:		Medium	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
Medium	Medium	Medium	Medium
Kimberly	Hansen	Murtaugh	Hollister
Medium	Medium	Medium	Medium

Hazard Description

Flooding is defined by NWS as, “the inundation of normally dry areas as a result of increased water levels in an established water course.” River flooding, the condition where the water levels rise to overflow its natural banks, may occur due to several causes, including prolonged rainfall, locally intense thunderstorms, snowmelt, and ice jams. In addition to these natural events, there are a number of factors controlled by human activity that may cause or contribute to flooding. These include dam failure, levee failure, and activities that increase the rate and amount of runoff, such as paving, reducing ground cover, and clearing forested areas. Flooding is a periodic event along most rivers, with the frequency depending on local conditions and controls (i.e., dams and levees). The land along rivers that is identified as being susceptible to flooding is called the floodplain. The Federal standard for floodplain management under the National Flood Insurance Plan (NFIP) is the “100-year floodplain.” This area is chosen using historical data such that in any given year there is a 1% chance of a flooding occurrence in any given year. In Idaho, flooding most commonly occurs in the spring of the year and is caused by snowmelt. Floods occur in Idaho every 1 to 2 years and are considered the most serious and costly natural hazard affecting the state. The amount of damage caused by a flood is influenced by the speed and volume of the water flow, the length of time the impacted area is inundated, the amount of sediment and debris carried and deposited, and the amount of erosion that may occur.

Flooding is a dynamic natural process. A cycle of erosion and deposition is continuously rearranging and rejuvenating the aquatic and terrestrial systems along rivers, streams, and coastal bluffs. Although many plants, animals, and insects have evolved to accommodate and take advantage of these ever-changing environments, property and infrastructure damage often occurs when people develop coastal areas and floodplains and natural processes are altered or ignored.

Flooding can also threaten life, safety, and health and often results in substantial damage to infrastructure, homes, and other property. The extent of damage caused by a flood depends on the topography, soils, and vegetation in an area; the depth and duration of flooding; velocity of flow; rate of rise; and the amount and type of development in the floodplain.

A number of flood-related terms are frequently used in this AHMP and are defined below.

Flood Insurance Study (FIS): The official report provided by the Federal Insurance Administration that provides flood profiles, the flood boundary-floodway map, and the water surface elevation of the estimated 100-year base flood.

Flood Insurance Rate Map (FIRM): Official map(s) on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. Designation on the floodplain (FIRM) maps always includes the letters A or V. FIRM floodplain zones and critical facilities for the Twin Falls area (Zone A) are shown in Figures 3.8 and 3.9.

Recurrence Interval: The average number of years between floods of a certain size is the recurrence interval or return period.

100-year Base Flood: The flood having a 1% chance of being equaled or exceeded in any given year.

Floodplain: Land adjacent to a lake, river, stream, estuary, or other water body that is subject to flooding. If left undisturbed, the floodplain serves to store and discharge excess floodwater. In riverine systems, the floodplain includes the floodway.

Floodway: The channel of a river or other watercourse and the adjacent areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 1 foot.

Types of Flooding

Flooding can occur in a number of ways, and many times are not independent of each other and can occur simultaneously during a flood event. The types of flooding considered for this plan include:

- Heavy rainfall
- Urban storm water overflow
- Rapid snowmelt
- River ice jams
- Flash floods
- Canal failure
- Dam failure.

Flash floods differ from floods in the rapidity with which they develop. Floods generally develop over a period of several days, providing more warning time and time for preparation and evacuation. Flash floods occur with little or no warning. They may occur during thunderstorms due to rapid runoff from steep terrain, from areas where the soil is already saturated, or in urban areas where vegetation has been removed and pavement has replaced exposed soil. Flash floods may also arise as the result of dam failure or the breakup of ice jams.

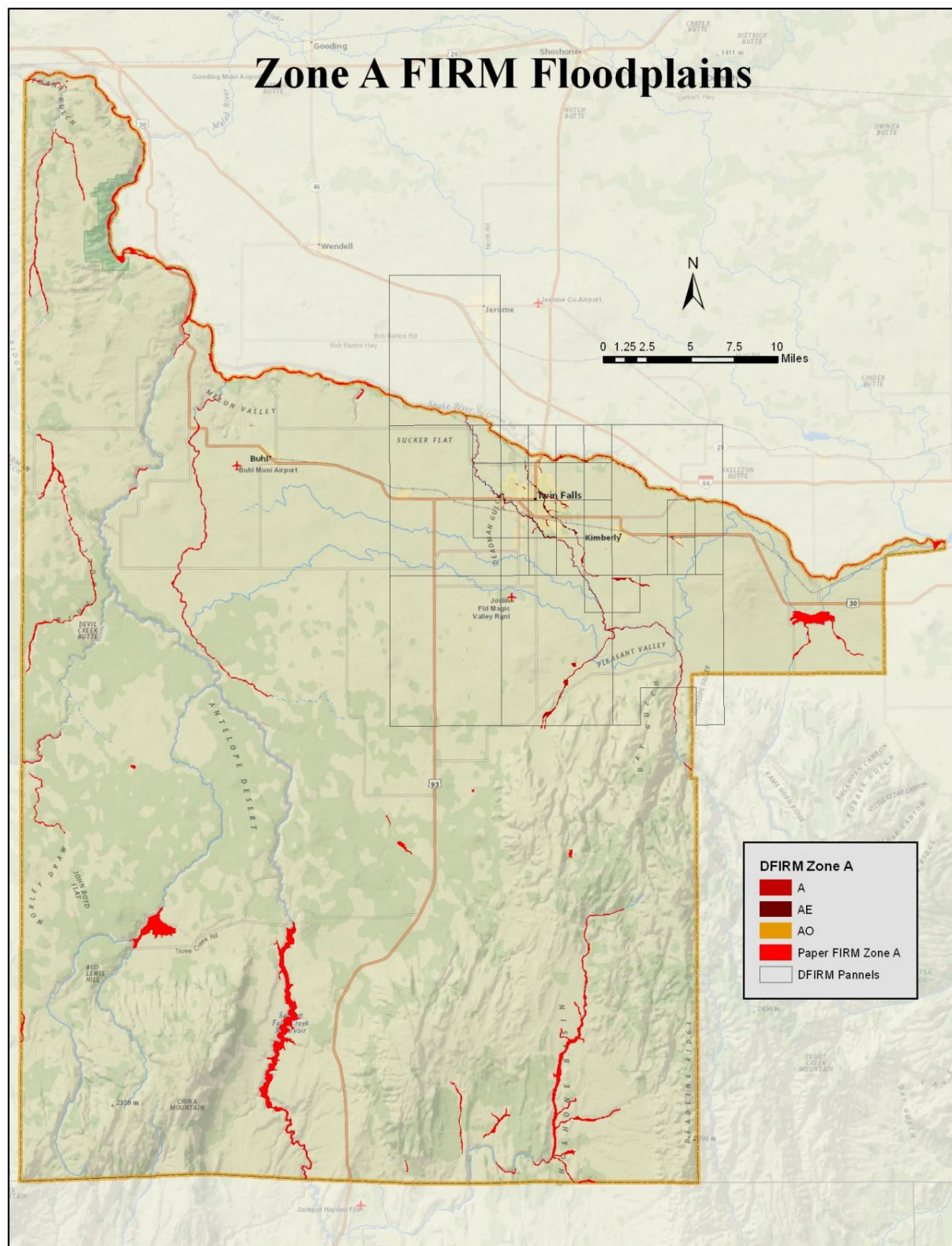


Figure 3.8. FIRM 100-Year Floodplain

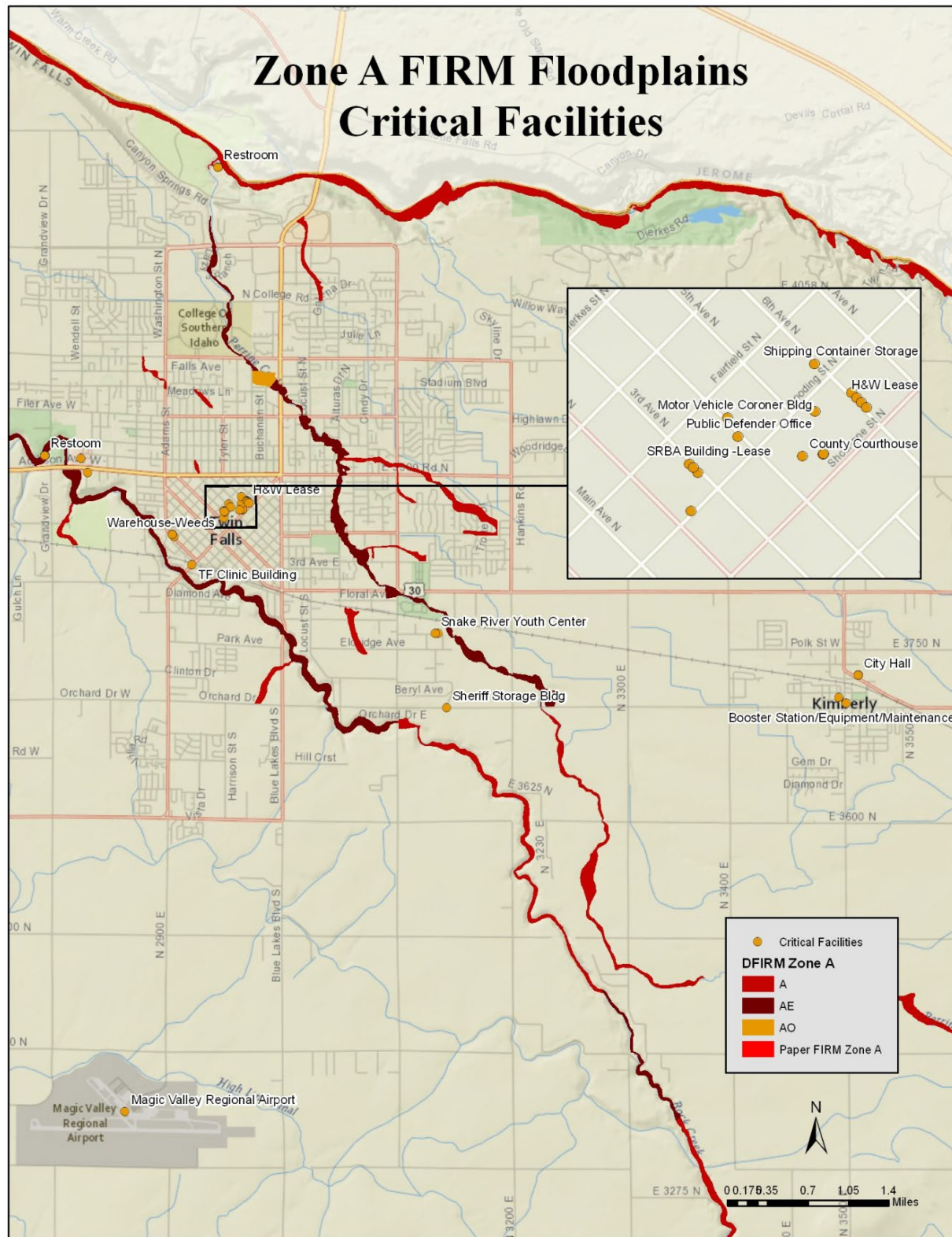


Figure 3.9. FIRM Floodplain critical facilities

Flash flood severity is primarily linked to water velocity, which, in turn, is directly linked to the slope of the affected area. Because Twin Falls County has relatively large changes in elevation, with a minimum elevation of 2,657 feet and a maximum depth of 7,828 feet above sea level, there are areas of high potential flash flooding severity within the county (Figure 3.10).

The area extending from 10 to 12 miles south of the Snake River is a flat plain that forms part of the Magic Valley. This area is mostly agricultural and developed land with little change in elevation. It is, therefore, assigned a relatively low severity potential in spite of its relatively high likelihood of flash flooding. Rolling hills exist south of the plain with minor changes in elevation. The land cover in this area consists of grass and shrub lands. The changes in topography in this region increase the possible severity of flash floods to medium. The southern and western portions of the county are primarily owned by the National Forest Service and are mountainous with major changes in elevation. This, therefore, is the portion of the county that has the potential for the most severe flash flood consequences.

Historical Frequencies

Even though damaging flood events aren't recorded with the NWS and other sources, it doesn't mean that they don't occur. Historical frequencies for Twin Falls County are provided in Table 3.9. Based on historic data, severe flooding will occur every 2 years.

There have been no state or federal disaster declarations for flooding since 2017.

Table 3.9. Twin Falls County Historical Flood Events

Location	Date	Event	Description
Filer/Twin Falls	June 7, 1996	Flash Flood	Flooding on highway.
Twin Falls	Aug 7, 1997	Flash Flood	Minor street flooding in Twin Falls.
Hollister	June 8, 2006	Flash Flood	Flooding on highway.
Rogerson	July 25, 2006	Flash Flood	Flooding on road/ road closed.
Twin Falls	July 5, 2009	Flash Flood	Unknown
Twin Falls	Aug 05, 2010	Flash Flood	Unknown
Filer	Sept 04, 2013	Flash Flood	Street flooding from thunderstorms.
Rock Creek	August 13, 2014	Flash Flood	Flooding led to washed out roadways.
Twin Falls	Feb 08, 2017	Flood	Rainfalls coupled with rapid melting of snow led to widespread flooding totaling \$2.5M in damages.

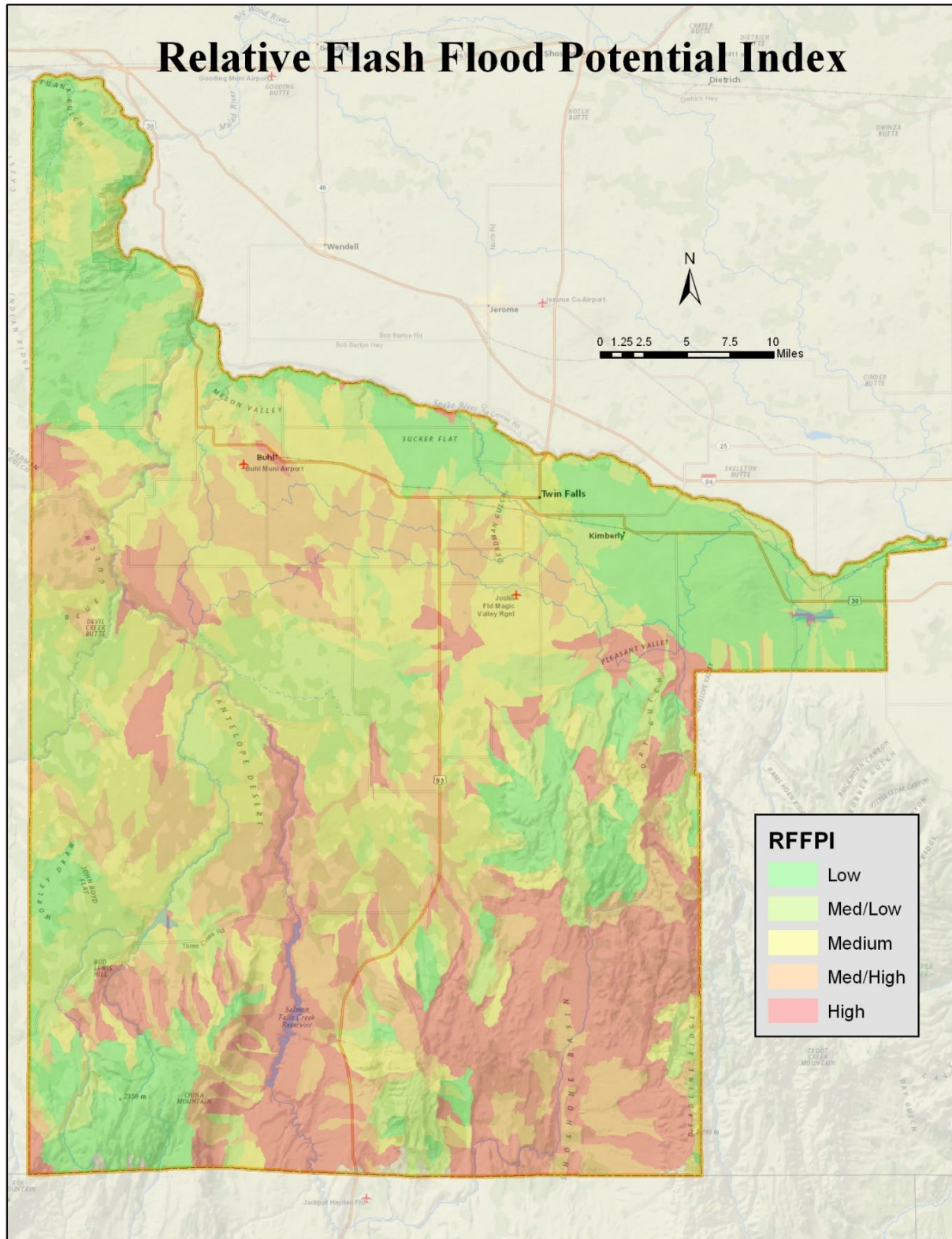


Figure 3.10. Twin Falls County Relative Flash Flood Potential Index Map

Impacts

Although human death and injury can possibly occur as a result of flooding, it is not common. Human hazards that could occur during flooding include drowning, electrocution due to downed power lines, leaking gas lines, fires and explosions, hazardous chemicals, and displaced wildlife. Economic loss and disruption of social systems are often enormous. Floods may destroy or damage structures, furnishings, and business assets, including records, crops, livestock, roads and highways, and railways. They often deprive large areas of electric service, potable water supplies, wastewater treatment, communications, and many other community services (including medical care) and may do so for long periods of time.

Areas of the county where significant development has occurred have become more prone to flash flooding because of the increased impervious surface area. As farm land is developed and housing is built in traditionally agricultural areas, additional impervious surface areas increase the need for proper storm water collection and drainage.

Flooding may be impacted by climate change from the impacts of early snowmelt and extreme precipitation events. ClimRR predicts that the maximum average temperature will increase by 2.8 C and the average minimum temperature will increase by 2.9 C. Temperature increase will increase the rate of snowmelt within the county and upstream, potentially increasing the intensity of spring flooding. Increased temperature may cause precipitation to come in the form of rain and not snow, increasing the amount of rain on frozen ground, increasing runoff potential.

Based on climRR, winter precipitation is expected to increase by 0.08 inches over a half century.

Loss Estimates

Losses from stream flooding were calculated using HAZUS. The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state, and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The selected geographical size of the region is approximately 1,928 square miles and contains 6,294 census blocks. It contains over 29,000 households and has a total population, based on the 2010 U.S. Census, of 77,230 people. There are an estimated 30,794 buildings in the region with a total building replacement value of \$7,071 million.

For a 100-year flood, HAZUS estimates that approximately 24 buildings will be at least moderately damaged, and no buildings that will be destroyed. The buildings are located mostly in Twin Falls and Kimberly. No essential facilities, which include 11 fire stations, 2 hospitals, 6 police stations, and 39 schools, would be damaged according to the HAZUS model.

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 235 households in Twin Falls, Kimberly, and Filer will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area.

The total economic loss estimated for the flood is \$42.24 million, which represents 4.28% of the total replacement value of the scenario buildings.

The building losses are broken into two categories: (1) direct building losses and (2) business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with the inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building related losses were \$15.63 million. Approximately 61% of the estimated losses were related to the business interruption of the region. The residential occupancies comprised 27.46% of the total loss.

Twin Falls has approximately 4,254 structures, including some critical facilities (as shown in Figure 4.9) in a floodplain, resulting in the potential of up to \$456 million in damages.

Twin Falls County has approximately 1,326 structures in a FEMA floodplain, resulting in up to \$116 million in potential damages.

Hansen has approximately 15 structures in a FEMA floodplain that could result in up to \$1.7 million in damages.

There are no identified FEMA floodplains within the cities of Buhl, Filer, Kimberly, Castleford, Murtaugh, or Hollister. Flooding would likely be the result of plugged culverts, ditches that can't handle large volumes of water in a short period, or overloaded storm retention systems. Flooding of and public facility will impact citizen of the jurisdiction as commerce is disrupted and distribution of basic services are slowed. Minimal damage would be expected in the event of a flood within the city limits of these jurisdictions. Damage would likely be isolated to individual structures and could not be predicted from year to year.

Population increases near the Snake River, place more people and structures in flood prone areas.

Floods present various threats to public health and safety, including contaminated drinking water, unsafe food, poor sanitation, mosquitos and animals, mold and mildew, and the increased spread of illness and disease.

Vulnerable populations are less likely to recover from flood damage and may have a higher rate of displacement.

Probability of Future Occurrence:

Based on past events, the probability that significant flooding will occur in a given year is 30% and can be expected to occur every 3.3 years.

Repetitive Loss - None.

Dam/Canal Failure

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		Low	
Impact/Consequence:		Low	
Community Vulnerability:		Low	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
Low	Low	Low	Low
Kimberly	Hansen	Murtaugh	Hollister
Low	Low	Low	Low

Description

Dam failure is the unintended release of impounded waters. Dams can fail for one or a combination of the following reasons:

- Overtopping caused by floods that exceed the capacity of the dam,
- Deliberate acts of sabotage,
- Structural failure of materials used in dam construction,
- Poor design and/or construction methods,
- Movement and/or failure of the foundation supporting the dam,
- Settlement and cracking of concrete or embankment dams,
- Piping and internal erosion of soil in embankment dams, and/or
- Inadequate maintenance and upkeep.

Failures may be categorized into two types: (1) component failure of a structure that does not result in a significant reservoir release and (2) uncontrolled breach failure that leads to a significant release. With an uncontrolled breach failure of a manmade dam, there is a sudden release of the impounded water, sometimes with little warning. The ensuing flood wave and flooding have enormous destructive power.

The objective of canals is to reduce erosion, prevent degradation of water quality, and improve the efficient use of water by minimizing conveyance losses from seepage or structural failure. There are several types of flood threats posed by canals. The first type is a canal break or breach. This occurs when the canal walls are breached because of erosion or deterioration caused by rodents and other small animals. This has the potential to cause significant flooding, especially if the canal is elevated. The second type of flood threat posed by canals is overtopping. This can be

caused by an obstruction in the canal that causes the water to overtop the bank. This type of event usually causes erosion of the bank and causes a canal breach.

Historical Frequencies

There has been only one recorded dam failure event in Twin Falls County (Table 3.10). There have been no dam failures in current history. There is only one recorded canal failure in recent history. This is by no means an exhaustive list of canal failure events in the county; however, it does provide some insight into the historic impacts of canal failure.

There have been no state or federal disaster declarations for dam or structure failure.

Table 3.10. Dam Failure Events

Place	Date	Event	Estimated Damage
Deep Creek	3/10/1910	Dam Failure	Unknown
Shoshone Falls	3/24/1910	Canal Break	Unknown
Highline Canal	2/27/1917	Canal Break	Homes evacuated and damaged, several thousand dollars to repair canal.
Highline Canal	7/26/1917	Canal Break	Washed out property 2 miles down the draw.
Hansen	01/05/1979	Canal Break	Backed up sewer system in Twin Falls. 20-foot break in main canal flooded farms and forced evacuation of families.
Twin Falls County	8/19/2024	Canal Break	Canal breached causing flooding of roadways, homes, and structures.

Dam Classifications

Each dam inspected by IDWR is given both a size and risk classification. The IDWR is responsible for dam safety in the state. The dam safety program is described on the IDWR web site.

Dams 10 feet or higher, or which store more than 50 acre-feet of water, are regulated by the IDWR (as are mine tailings impoundment structures). The IDWR inspects these dams or tailings structures every other year unless one has a particular problem.

Size Classification

Small – 3: Twenty (20) feet high or less and a storage capacity of less than 100 acre-feet of water.

Intermediate – 2: More than 20 but less than 40 feet high or with a storage capacity of 100 to 4,000 acre-feet of water.

Large – 1: Forty (40) feet high or more or with a storage capacity of more than 4,000 acre-feet of water.

Risk Classification

This classification is used by IDWR to classify potential losses and damages anticipated in down-stream areas that could be attributable to failure of a dam during typical flow conditions.

Low Risk – 3: No permanent structures for human habitation; minor damage to land, crops, agricultural, commercial, or industrial facilities, transportation, utilities, or other public facilities or values.

Significant Risk – 2: No concentrated urban development, one (1) or more permanent structures for human habitation that are potentially inundated with flood water at a depth of 2 feet or less or at a velocity of 2 feet per second or less. Significant damage to land, crops, agricultural, commercial, or industrial facilities; loss of use; and/or damage to transportation, utilities, or other public facilities or values.

High Risk – 1: Urban development, or any permanent structure for human habitation, that is potentially inundated with flood water at a depth of more than 2 feet or at a velocity of more than 2 feet per second. Major damage to land, crops, agricultural, commercial, or industrial facilities; loss of use; and/or damage to transportation, utilities, or other public facilities or values.

The number and classification of dams located in Twin Falls County include:

- Seven (7) small
- Eight (8) intermediate sized
- Six (6) large
- Eleven (11) low-risk
- Five (5) significant risk
- Five (5) high-risk.

Table 3.11 provides a listing and ranking of the dams within Twin Falls County that are part of the IDWR Dam Safety Program.

Table 3.11. Dams in Twin Falls County

Name	Stream	Purpose	Risk Category	Size Category	Type	Storage Capacity (acre-ft)	Height (ft)
Milner Dam	Snake River	OS	1	1	Earth	36,300	83
Murtaugh Lake	Snake River	OS	1	1	Earth	7,720	39
Shoshone Falls	Snake River	P	2	2	Concrete gravity	750	22
Twin Falls	Snake River	P	2	2	Concrete gravity	1,000	26
Salmon Falls Upper	Snake River	PL	3	3	Concrete gravity	3,000	10
Salmon Falls Lower	Snake River	P	1	1	Concrete gravity	18,500	63
Salmon Falls Regulatory	Salmon Falls Creek	L	1	1	Concrete arch	230,650	217
Salmon Falls Creek	Salmon Falls Creek	O	3	3	Earth	15	13.1
Salmon Falls Creek	Salmon Falls Creek	I	3	3	Concrete gravity	60	8
Deep Creek No. 1	Deep Creek	J	3	2	Earth	135	13
Deep Creek No. 2	Deep Creek	J	2	2	Earth	1,500	39
Herziner	TR-Salmon Falls Creek	I	1	1	Earth	5	13

Table 3.11. (continued)

Name	Stream	Purpose	Risk Category	Size Category	Type	Storage Capacity (acre-ft)	Height (ft)
Cedar Creek	Cedar Creek	I	1	1	Earth	30,000	84
Cedar Creek Holding	Cedar Creek OS	I	3	2	Earth	200	19.5
McMullen	Cottonwood Creek	I	2	2	Earth	350	22
Williams	North Cottonwood Creek	I	3	1	Earth	850	43
Ray	TR-Snake River	HR	3	3	Earth	20	19
Heil	Devil Creek OS	I	3	2	Earth	480	22
Munsee	Salmon Falls Creek OS	I	3	3	Earth	90	18
Leno	Mule Creek Springs	I	3	2	Earth	25	26.7
Silver Lake	Silver Creek	I	2	3	Earth	16	29
Heil No. 2	Devil Creek OS	J	3	3	Earth	22	18.6

Loss Estimates

Impacts from dam failures can be extremely devastating, as evidenced by the failure of the Teton Dam in 1976. This failure changed the entire region's perception of hazard mitigation and emergency preparedness. The Salmon Falls Dam is the largest in the county. Based on past models, it is estimated that a failure of the Salmon Falls Dam would result in more than seven buildings being damaged, more than 10 households being displaced, and an economic loss of over \$1.25 million.

Impacts from canal failure are similar to those of flash and riverine flooding. Large amounts of debris and erosion exist as a result of canal failure flooding. Canal failure can happen without warning and residents may be stranded.

Probability of Future Occurrence:

Based on historic data, the probability that canal/dam failure will occur in a given year is 2.5%.

As climate change increases the severity and occurrence of storms, it can be expected that additional stress may be placed on dams as stormwater flows increase and cause accelerated filling and overtopping of dams.

There have been no state or federal declarations of disaster for dam failure in Twin Falls County.

Repetitive Loss – *None from dam failure. Repetitive loss from canal or drainage failures do not typically happen in the same location in Twin Falls County; however, losses seem to happen repetitively from the canal or drainage failures throughout the county due to loss of containment of canals and ditches due to burrowing rodent damage to the infrastructures.*

Earthquake

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		Low	
Impact/Consequence:		Low	
Community Vulnerability:		Low	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
Low	Low	Low	Low
Kimberly	Hansen	Murtaugh	Hollister
Low	Low	Low	Low

Description

The U.S. Geological Survey (USGS) defines earthquake as: “Ground shaking caused by the sudden release of accumulated strain by an abrupt shift of rock along a fracture in the Earth or by volcanic or magmatic activity, or other sudden stress changes in the Earth.” The hazards associated with earthquake are essentially secondary to ground shaking (also called seismic waves) that may cause buildings to collapse, displacement or cracking of the earth’s surface, flooding as a result of damage to dams or levees, and fires from ruptured gas lines, downed power lines, and other sources. Earthquakes are measured both in terms of their inherent “magnitude” and in terms of their local “intensity.” The magnitude of an earthquake is essentially a relative estimate of the total amount of seismic energy released and may be expressed using the familiar “Richter Scale” or using the “moment magnitude scale” now favored by most technical authorities. On either scale, significant damage can be expected from earthquakes with a magnitude of approximately 5.0 or higher. What determines the amount of damage that might occur in any given location, however, is not the magnitude of the earthquake but the intensity at that particular place. Earthquake intensity decreases with distance from the earthquake’s “epicenter” (its focal point) but also depends on local geologic features (i.e., depth of sediment and bedrock layers).

Intensity is most commonly expressed using the “Modified Mercalli Intensity (MMI) Scale” (Figure 3.11). More quantitatively, intensity may be measured in terms of “peak ground acceleration” (PGA) (Figure 3.12), expressed relative to the acceleration of gravity (g) and determined by seismographic instruments. While Mercalli and PGA intensities are arrived at differently, they correlate reasonably well. The locations most susceptible to earthquakes are known; however, there is little ability to predict an earthquake in the short term.

I. Instrumental	Generally not felt by people unless in favorable conditions.
II. Weak	Felt only by a few people at best, especially on the upper floors of buildings. Delicately suspended objects may swing.
III. Slight	Felt quite noticeably by people indoors, especially on the upper floors of buildings. Many do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration similar to the passing of a truck. Duration estimated.
IV. Moderate	Felt indoors by many people, outdoors by few people during the day. At night, some awoken. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rock noticeably. Dishes and windows rattle alarmingly.
V. Rather Strong	Felt inside by most; may not be felt by some outside in non-favorable conditions. Dishes and windows may break, and large bells will ring. Vibrations like large train passing close to house.
VI. Strong	Felt by all; many frightened and run outdoors, walk unsteadily. Windows, dishes, glassware broken; books fall off shelves; some heavy furniture moved or overturned; a few instances of fallen plaster. Damage slight.
VII. Very Strong	Difficult to stand; furniture broken; damage negligible in building 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. Noticed by people driving motor cars.
VIII. Destructive	Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture moved.
IX. Violent	General panic; 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.
X. Intense	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundation. Rails bent.
XI. Extreme	Few, if any masonry structures remain standing. Bridges destroyed. Rails bent greatly.
XII. Cataclysmic	Total destruction – Everything is destroyed. Lines of sight and level distorted. Objects thrown into the air. The ground moves in waves or ripples. Large amounts of rock move position. Landscape altered, or leveled, by several meters. In some cases, even the routes of rivers are changed.

Figure 3.11. Modified Mercalli Intensity Scale

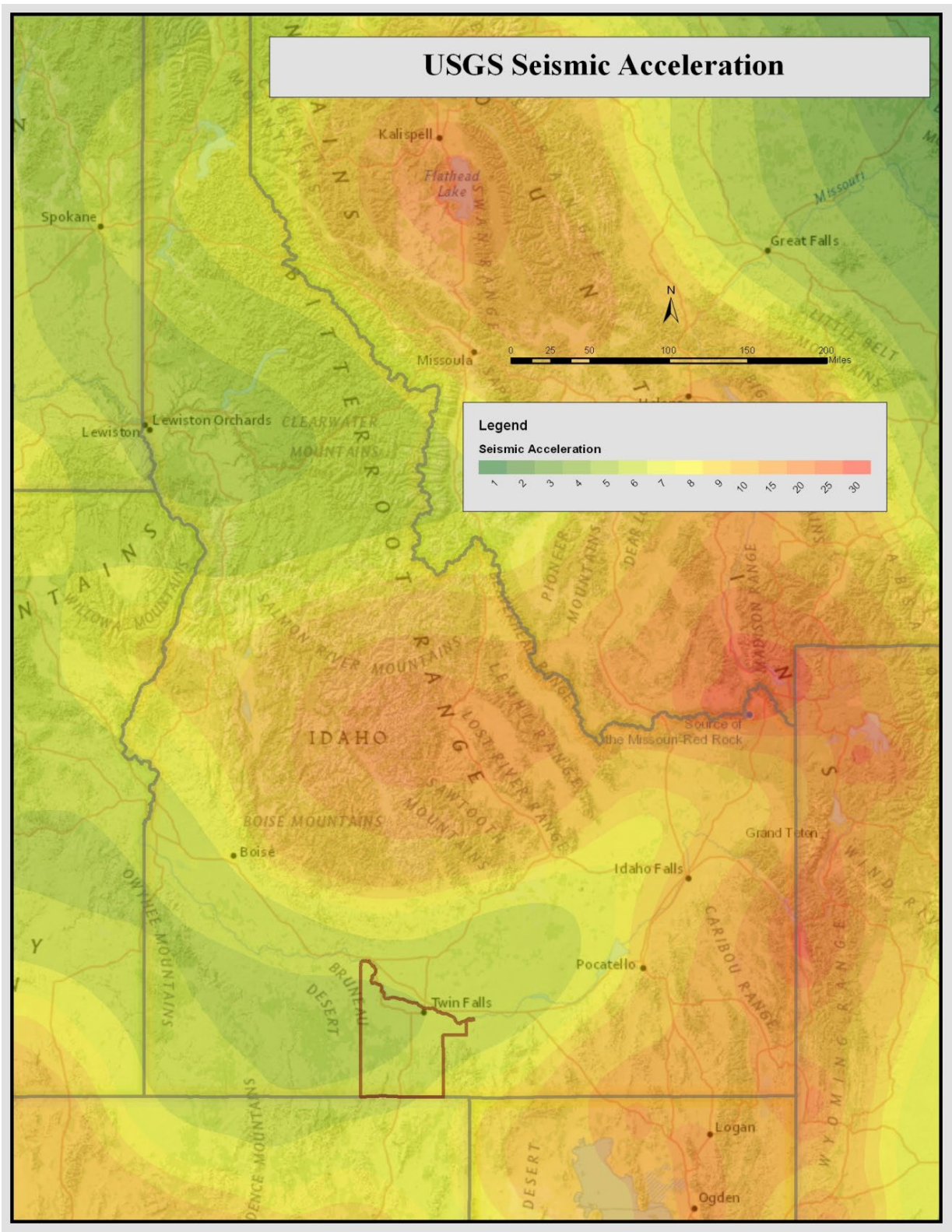


Figure 3.12. USGS Seismic Acceleration Map

Historical Frequencies

Historical data indicate that no earthquakes where the epicenter was within Twin Falls County have occurred in the past 100 years. There have, however, been reports of ground shaking in the county from earthquakes with their epicenters in surrounding areas, as discussed below.

There have been no state or federal disaster declarations for earthquake in Twin Falls county.

March 28, 1975

Earthquake Location: Ridgedale Area near Pocatello, ID

Earthquake Magnitude: 6.1

MMI Magnitude: Kimberly – 3, Murtaugh – 3, Twin Falls – 5.

October 28, 1983

Earthquake Location: Near Borah Peak, ID

Earthquake Magnitude: 6.9

MMI Magnitude: Buhl – 5, Filer – 4, Hansen – 4, Kimberly – 4, Twin Falls – 6.

February 22, 2008

Earthquake Location: 5 miles E/NE of Wells, NV

Earthquake Magnitude: 6.0

MMI Magnitude: Buhl – 3.4, Castleford – 3.1, Filer – 3.7, Hagerman – 3, Kimberly – 3.3, Murtaugh – 3.4, Twin Falls – 3.3.

National Earthquake Hazards Reduction Program and Liquefaction Analysis

In the 2014 AHMP, a National Earthquake Hazards Reduction Program Site Class (NEHRP) map was established to assign site classes to building locations based on the geotechnical properties of earth materials within 100 feet of the ground surface (Figure 3.13). These site class designations provide some measure of the potential for strong ground shaking in a particular area during an earthquake.

Additionally, a Liquefaction Susceptibility Map for Twin Falls County, which mapped soils susceptible to liquefaction from potential ground shaking from an earthquake, was also created (Figure 3.14).

These reports, which are found in Attachment 3 of the 2014 AHMP, were not based on earthquake potential or in any way attempted to predict when earthquakes might occur. They indicate the potential for hazards (i.e., damage) to occur to infrastructure based on the geotechnical properties of the subsurface. There are very few soils with liquefaction potential within Twin Falls County, and where they are mapped, there is very little (if any) infrastructure located there. This work, as stated, does not state that an earthquake would not occur in Twin Falls County but rather that the damage would be minimal.

According to the USGS, no quaternary faults lie within Twin Falls County, as demonstrated in Figure 3.15.

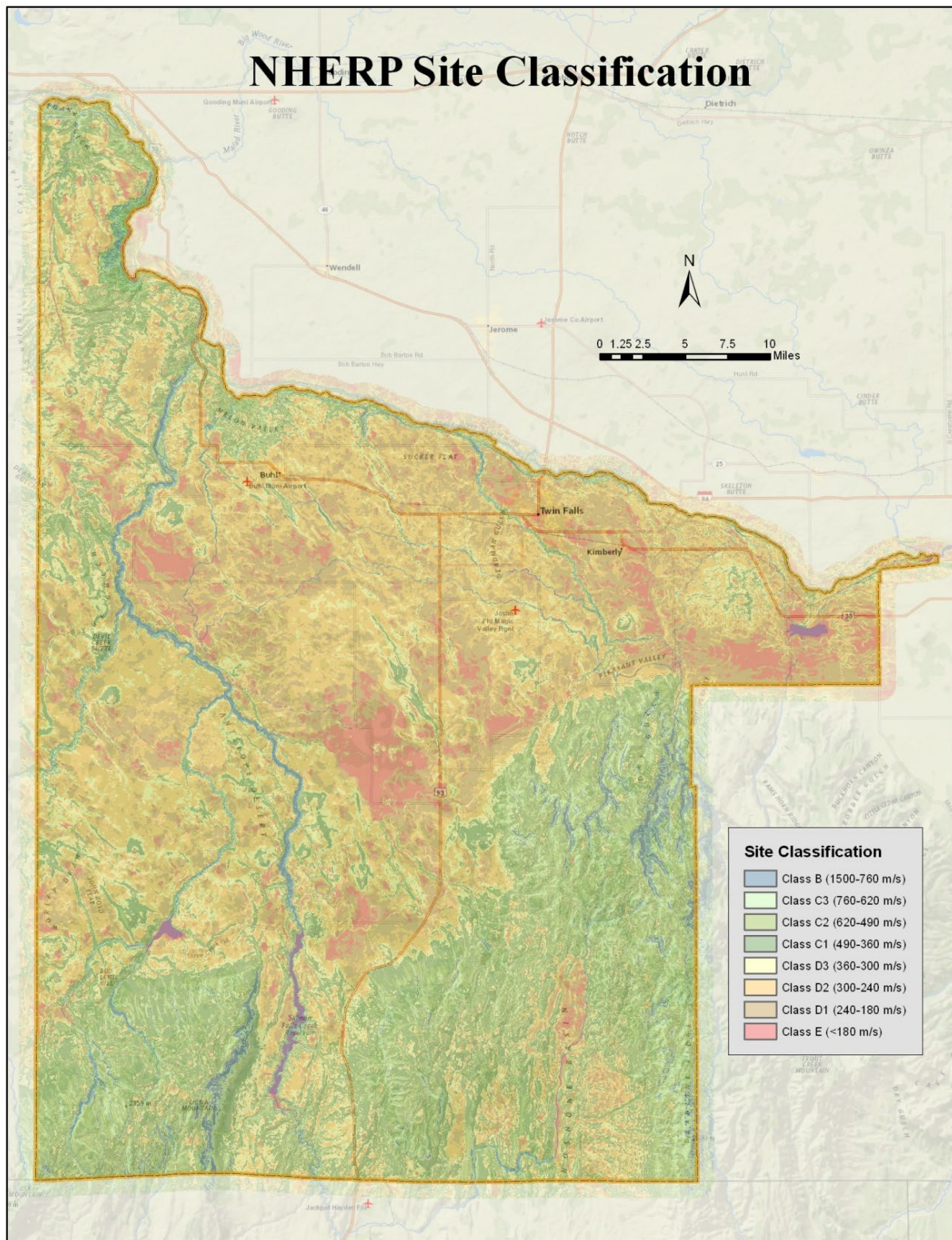


Figure 3.13. Twin Falls County NHERP Site Classification Map

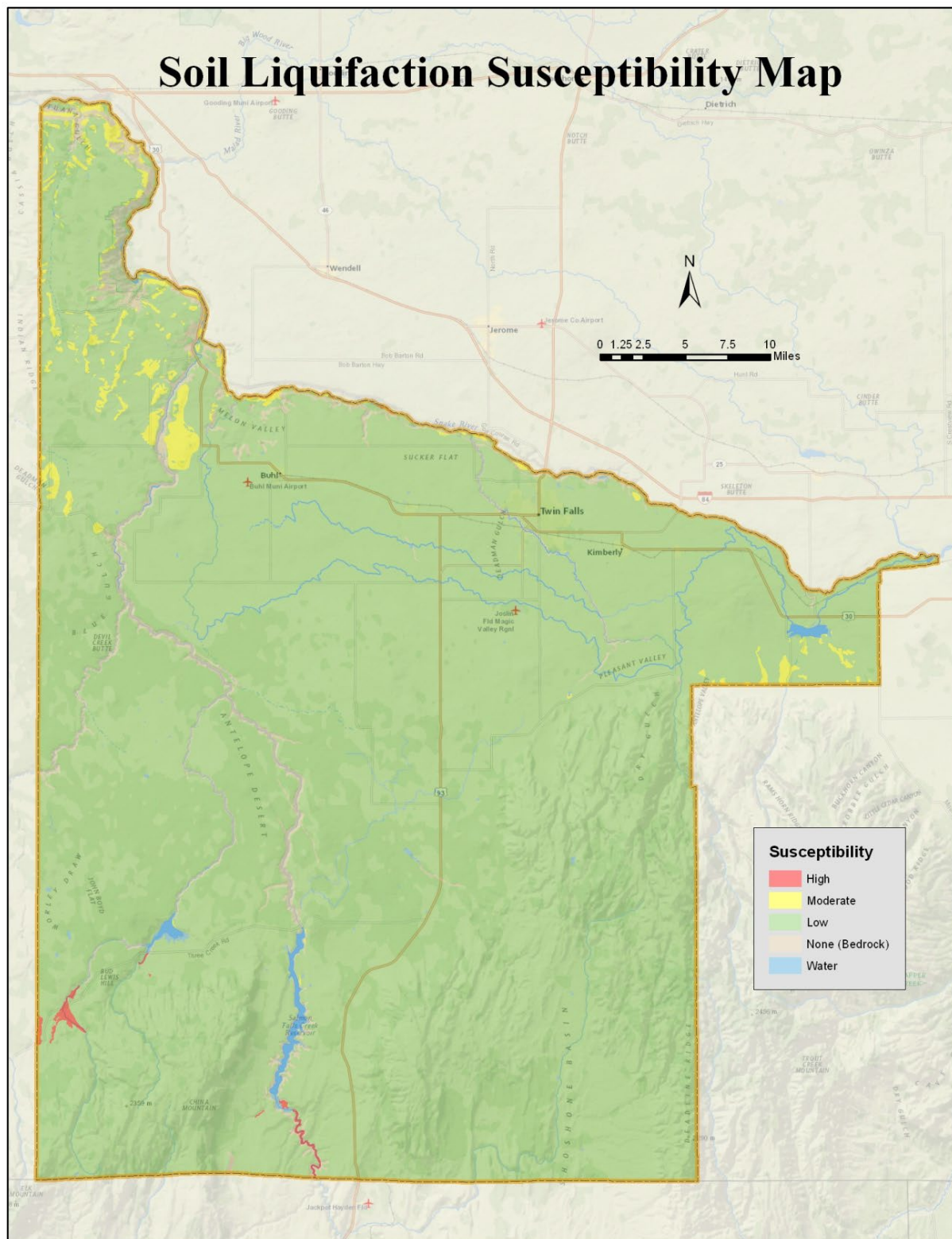


Figure 3.14. Twin Falls County Soil Liquefaction Map

U.S. Geological Survey Quaternary Faults

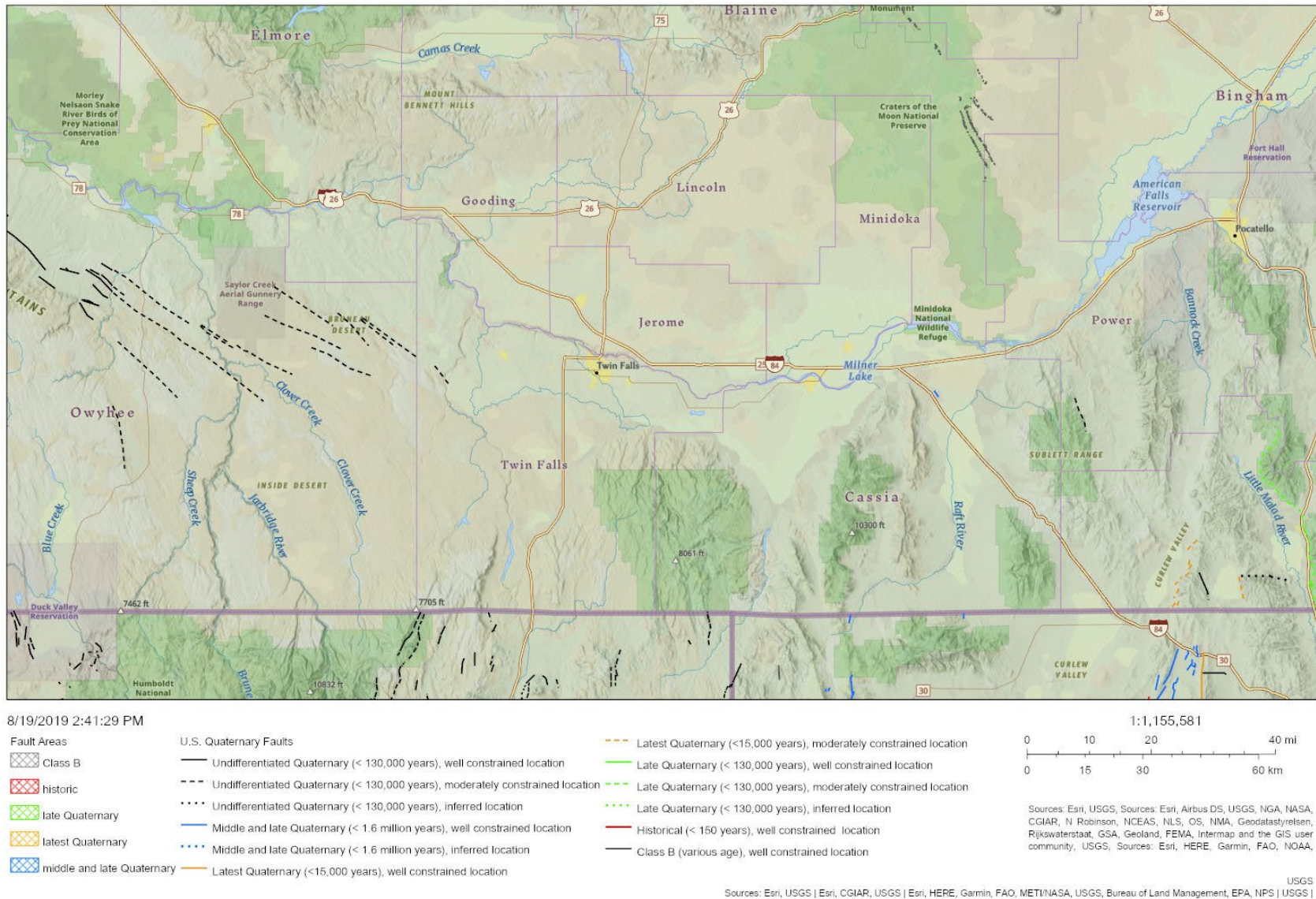


Figure 3.15. U.S. Geological Survey Quaternary Faults

Impacts

Earthquakes are capable of catastrophic consequences, especially in urban areas. Worldwide, earthquakes have been known to cost thousands of lives and enormous economic and social losses. For minor earthquakes, damage may be done only to household goods, merchandise, and other building contents, and people are occasionally injured or killed by falling objects. More violent earthquakes may cause the full or partial collapse of buildings, bridges, overpasses, and other structures. Fires due to broken gas lines, downed power lines, and other sources are common following an earthquake and often account for much of the damage. Economic losses arise from destruction of structures and infrastructure, interruption of business activity, and innumerable other sources. Utilities may be lost for long periods of time and all modes of transportation may be disrupted. Disaster services, including medical, may be both disabled and overwhelmed. In addition to broken gas lines, other hazardous materials may be released.

Loss Estimates

Losses for earthquake events were calculated using HAZUS, FEMA's loss estimation software. The analysis was completed using local data and updated NEHRP and Soil Liquefaction maps. The scenario used was a probabilistic magnitude 7 event.

HAZUS estimates that approximately 75 buildings will be at least moderately damaged. This is over 0.00% of the buildings in the region. There are an estimated 0 buildings that will be damaged beyond repair.

HAZUS estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the earthquake. Of these, 0 people will seek temporary shelter in public shelters.

HAZUS estimates that there will be 1 injury requiring medical attention but not hospitalization.

The total economic loss estimated for the earthquake is \$4.75 million, which includes building and lifeline related losses based on the region's available inventory.

The building losses are broken into two categories: (1) direct building losses and (2) business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building related losses were \$4.63 million; 16% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies, which made up over 63% of the total loss.

Hazard Evaluation

While the possibility of an earthquake in Twin Falls County exists, HAZUS loss estimates indicate that the risk is low. Moderate damage to only 235 buildings is projected with little or no debris and no fires. This represents less than 1% of the total number of buildings in the county and less than 0.2% of their replacement value for the worst-case scenario (magnitude 7.0 earthquake). Casualties would also be very limited with no deaths and only one minor injury in the worst-case scenario. It should be understood that a magnitude 7.0 earthquake would be expected to have extensive impacts. The relatively low HAZUS loss estimates for magnitude 7.0 arise because of the low probability that such an earthquake will occur.

The most vulnerable assets in all jurisdictions are unreinforced masonry structures and unreinforced chimneys of homes. Damaged or collapsed chimneys could result in the secondary hazard of fire. Nonstructural damage caused by falling and swinging objects may be considerable after any magnitude earthquake. Damage to bridges, specifically Perrine, Snake River, and Hansen bridges, could result in the isolation or slowing of services to Buhl, Twin Falls, Kimberly, Hansen, Murtaugh, Filer, Hollister, and Castleford.

Many utility lines run under the bridges and could be severely damaged during an earthquake event.

Increased populations and increased housing densities in higher earthquake hazard areas is expected to increase.

Vulnerable populations are most susceptible to their physical and financial ability to respond during a hazard. Vulnerable populations may be displaced for long periods of time due to an earthquake as their homes may be older and are less likely to meet current seismic codes.

Probability of Future Occurrence:

The probability that an earthquake will be felt in the county in a given year is 5%.

Climate change may impact seismic activity by increasing water pumped from the aquifer impacting patterns of stress loads on the Earth's crust.

Landslide/Mudslide

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		Low	
Impact/Consequence:		Low	
Community Vulnerability:		Low	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
Low	Low	Low	Low
Kimberly	Hansen	Murtaugh	Hollister
Low	Low	Low	Low

Description

The term “landslide” encompasses several types of occurrence (including mudslides) in which slope-forming materials such as rock and soil move downward under the influence of gravity. Such downward movement may occur as the result of an increase in the weight of slope-forming materials, an increase in the gradient (i.e., angle) of the slope, a decrease in the forces resisting downward motion (i.e., friction or material strength), or a combination of these factors. Factors that may trigger a landslide include weather related events such as heavy rainfall (one of the most common contributors), erosion, freeze-thaw weakening of geologic structures, human causes (i.e., excavation and mining, deforestation, vibration from explosions, or other sources), and geologic causes such as earthquake, volcanic activity, and shearing or fissuring. The speed of descent ranges from sudden and rapid to an almost imperceptibly slow creep where effects are only observable over a period of months or years.

Landslide deposits near Twin Falls County are shown in Figure 3.16.

Historical Frequencies

On June 27, 1913, a landslide at Shoshone Falls was caused by unusual flow of irrigation water over the rimrock above. The slide swept away trees and vegetation on the narrow draw leading to the riverbed. All access to the canyon was cut off.

Bluegill landslide is a large, naturally-occurring landslide located in south-central Idaho, approximately 22 miles west of Twin Falls and 6 miles west of Buhl (Figure 3.17). The landslide is predominantly on public land administered by the BLM, although portions of the landslide are on state and private property.

There have been no state or federal disaster declarations for landslide in Twin Falls County.

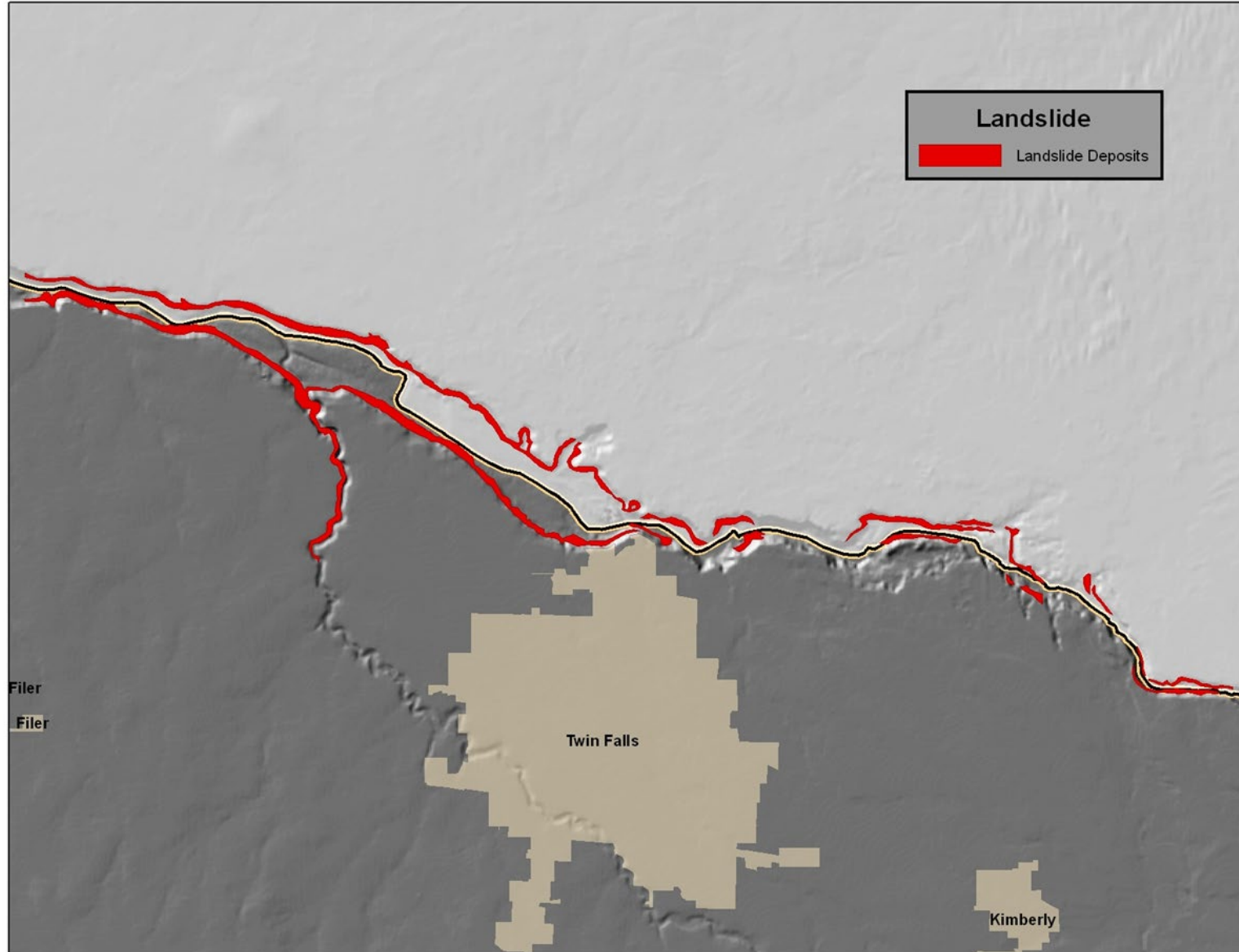


Figure 3.16. Landslide Deposits near Twin Falls County.



Figure 3.17. Bluegill Landslide

Bluegill is part of a larger landslide complex that forms an area in the Salmon Falls Creek drainage named Sinking Canyon. The last major landslide movements in Sinking Canyon occurred in the summer of 1937 when several acres of farmland were lost over a period of several days into the existing canyon. The 1937 event was likely a continuation of landslides that have occurred in this area since the inception of the canyon.

The most recent movement of the Bluegill landslide occurred in late 1998 or early 1999. Movement of the landslide was brought to the attention of BLM in 1999 when recreational rock climbers noted the formation and widening of fractures in the basalt cliffs that form the canyon rim.

Initial monitoring determined that approximately 11 acres of the canyon rim had moved over a period of several months to a year. These movements created a dam that forms a lake that is approximately 1 mile long and averages about 130 feet wide. The primary hazard currently associated with the landslide is a possible breach of the dam that could cause flooding downstream.

As part of ongoing efforts to address possible public safety concerns, the BLM, in coordination with the USGS, has conducted an assessment of the landslide, examined mitigation options, and identified alternatives for further study and monitoring of the landslide. To date, movement of the landslide is minimal and remains under observation by BLM and the USGS.

In August 1987, a land slide occurred in the Hagerman fossil beds. The slides destroyed a pump station and crippled the water delivery system for 80 shareholders of the Bell Rapids Mutual Irrigation Co. The total loss was estimated at \$1.5 million. A Hagerman quadrangle map of the Twin Falls Counties is included as Figure 3.18.

There have been no other reported landslides in current history.

Impacts

Some of the many direct and indirect impacts of landslides include:

- Human and animal deaths and injuries and resulting productivity losses,
- Damage or destruction of structures,
- Destruction or blockage of roadways and resulting transportation interruption,
- Loss of (or reduced) land usage,
- Loss of industrial, agricultural, and forest productivity,
- Reduced property values in areas threatened by landslide,
- Loss of tourist revenues and recreational opportunities,
- Damage or destroyed infrastructure and utilities,
- Damming or alteration of the course of streams and resulting flooding, and
- Reduced water quality.

Loss Estimates

Potential losses due to landslides in Twin Falls County are difficult to calculate because the most landslide prone areas in Twin Falls County are in areas where there is little loss exposure. One critical area in the Snake River Canyon is a wall rockslide adjacent to the City of Twin Falls' domestic water well and the city's sewage treatment facilities. Protection of those facilities from potential losses is critical.

Hazard Evaluation

Landslide and rockslide risks are significant along the Snake River Canyon Rim. Historical evidence indicates that rocks have fractured along the canyon walls and slid into the canyon. Infrastructure has been built on top of and below some of these historic slide areas. Engineering studies indicate that rock fractures occur when water runs behind the rocks and freezes, expanding fractures and increasing the potential for slides.

Landslides could damage structures on top and below the Snake River Canyon Rim, including bridges that cross the Snake River Canyon. Damage to bridges, specifically Perrine, Snake River, and Hansen bridges, could result in the isolation or slowing of services to Buhl, Twin Falls, Kimberly, Hansen, Murtaugh, Filer, Hollister, and Castleford.

Many utility lines run under the bridges and could be severely damaged during a landslide event.

Climate changes can impact rainfall severity which affects landslide potential. Increased wildfires can also remove vegetation and the natural protection system from landslides.

Probability of Future Occurrence:

The probability of a landslide occurring in a given year is 0.6% with a reoccurrence interval of 15.5 years.



Wildfire

Hazard Overview			
Location:		County-Wide	
Frequency/Previous Occurrence:		High	
Impact/Consequence:		High	
Community Vulnerability:		High	
Overall Hazard Ranking by Jurisdiction			
Twin Falls	Buhl	Filer	Castleford
High	High	High	High
Kimberly	Hansen	Murtaugh	Hollister
High	High	High	High

Description

Wildfire is defined by the USDA Forest Service as: “A fire naturally caused, or caused by humans, that is not meeting land management objectives.”⁷ It is generally thought of as an uncontrolled fire involving vegetative fuels occurring in wildland areas. Such fires are classified for hazard analysis purposes as either “Wildland” or “Wildland Urban Interface” (WUI) fires.

Wildland fires occur in areas that are undeveloped except for the presence of roads, railroads, and power lines, while WUI fires occur where structures or other human development meets or is intermingled with the wildland or vegetative fuels. Wildland fire is currently considered a natural and necessary component of wildland ecology and, as such, is most often allowed to progress to the extent that it does not threaten inhabited areas or human interests and well-being. At the WUI, vigorous attempts are made to control fires; however, this becomes an increasingly difficult challenge as more and more development for recreational and living purposes takes place in wildland areas. Some wildland fires are ignited naturally (almost exclusively by lightning); however, most ignitions are a result of human activities, either careless or intentional. The rapidity with which a wildland fire spreads and the intensity with which it burns is controlled by a number of factors, including:

- Weather – wind speed and direction, temperature, and precipitation,
- Terrain – fires burn most rapidly upslope,
- Type of vegetation,
- Condition of vegetation – dryness,
- Fuel load – the amount and density of vegetation, and
- Human attempts to suppress.

⁷ http://www.fs.fed.us/fire/fireuse/education/terms/fire_terms_pg5.html

The Figures below generated by the Idaho Department of Lands (IDL) to quantify the risk of wildfires based on multiple categories, including aspect class, vegetation class, slope class, probability, WUIs and fire risk.

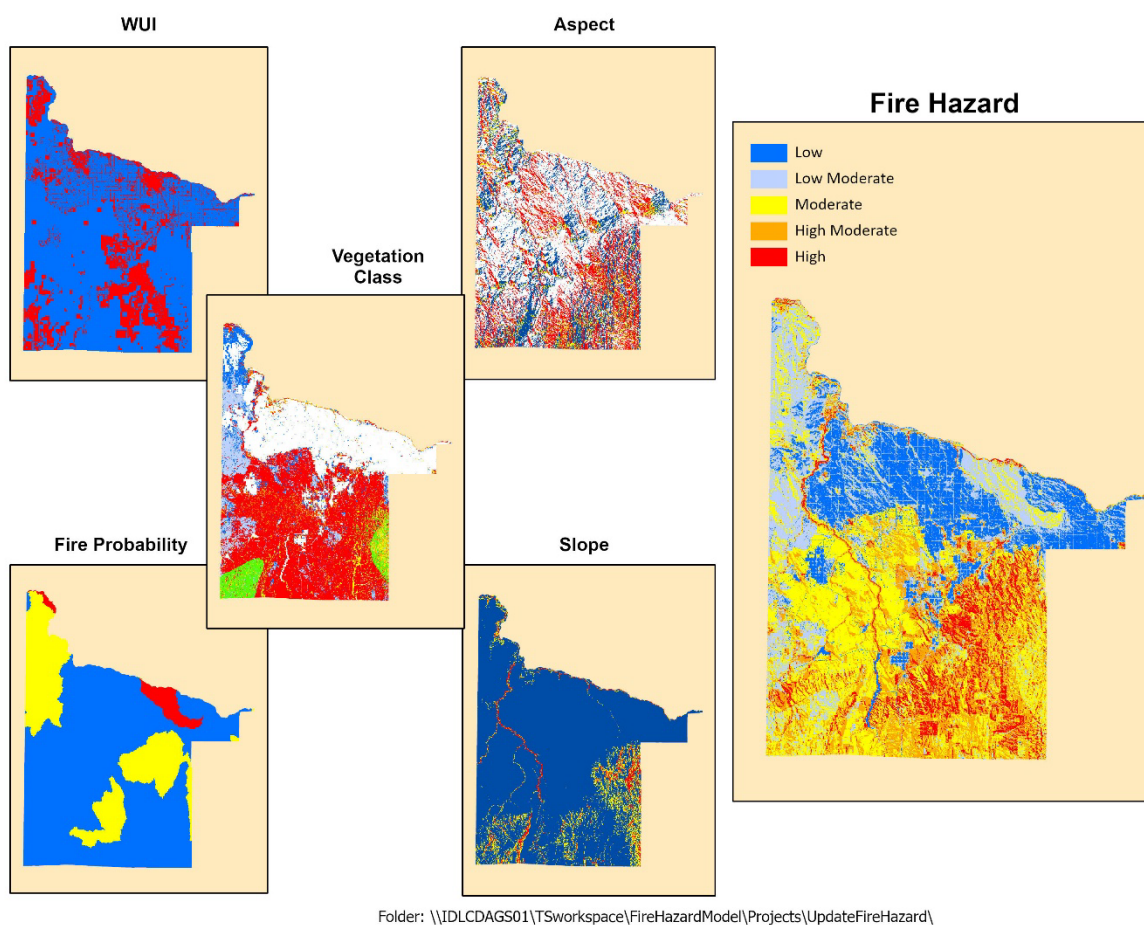


Figure 3.19. Wildfire Maps

The following cities are located within the WUI:

- Buhl
- Castleford
- Filer
- Hansen
- Hollister
- Kimberly
- Murtaugh
- Twin Falls City.

Historical Fire Events

There has been a downward trend of the number of wildfire events over the past 20 years; however, the acreage burned has increased. While wildfire can be healthy for a forest, burning too much vegetation at one time can be devastating.

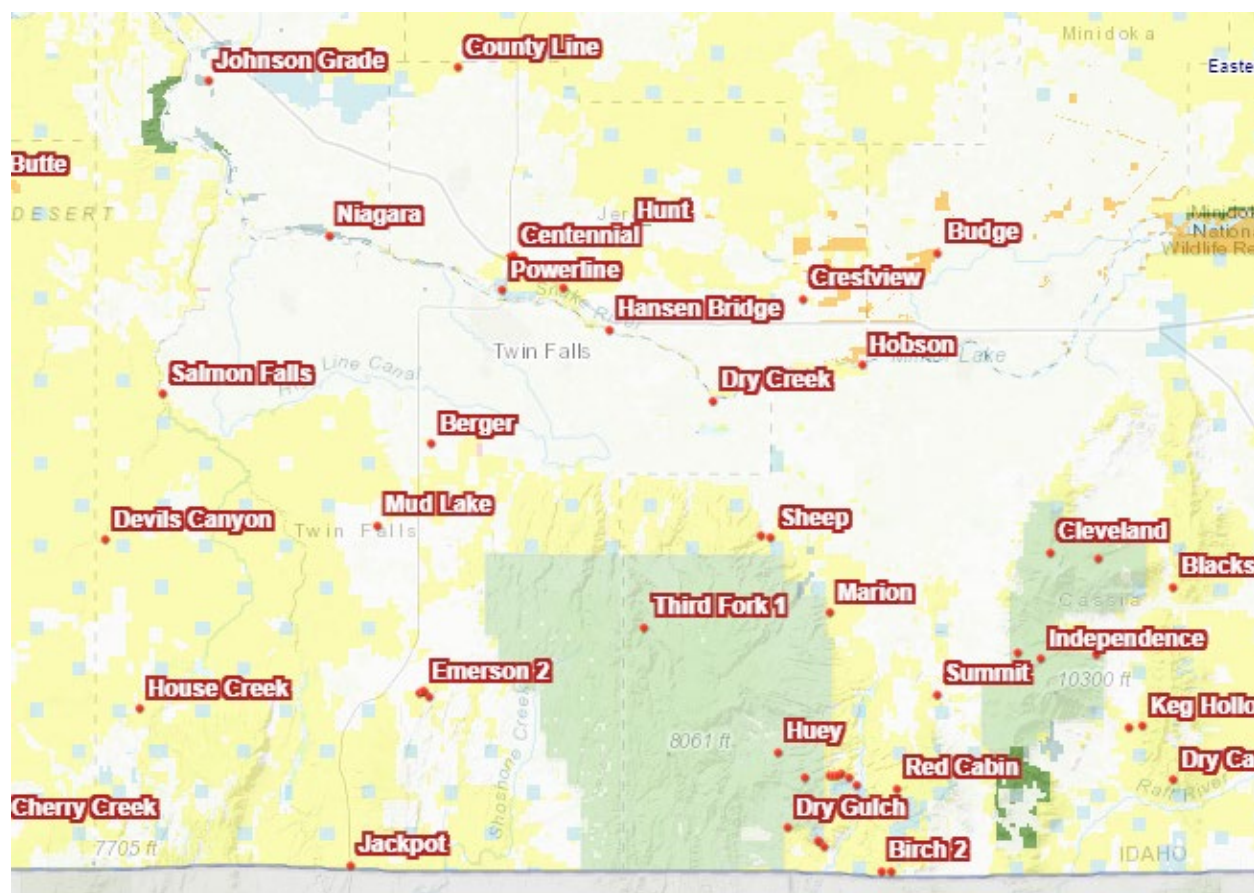


Figure 3.20. Current fires in Twin Falls County.

Impact

Wildland fires threaten the lives of anyone in their path, including hikers, campers, and other recreational users and, where suppression efforts are made, firefighters. Enormous volumes of smoke and airborne particulate materials are produced that can affect the health of persons for many miles downwind. Nearer to the fire, smoke reduces visibility, disrupting traffic and increasing the likelihood of highway accidents. As a result of wildland fire, there may be changes in water quality in the area and erosion rates may increase, along with increased rainfall runoff and flash flood threat and decreased rainfall interception and infiltration. Indirect impacts include losses to tourism, recreational and timber interests, and loss of wildlife habitat. WUI fires have most or all of the above impacts as well as those of structural fires, including injury and loss of life, and loss of structures and contents. Agricultural losses may also be sustained, including livestock, crops, fencing, and equipment.

Loss Estimates

Costs associated with wildfires include direct costs to suppress the fire, rehabilitation costs, and indirect costs such as lost tax revenue and property loss. According to the USDA Forest Service, suppression costs average \$634/acre.

Twin Falls county has a total of 141 critical facilities located in wildfire hazard areas (18.5% of its critical facilities) and approximately 21,352 (27.6% of its population) people living in wildfire hazard areas.

Hazard Evaluation

There is an average of approximately five wildfires per year in Twin Falls County, and historical evidence shows that the potential for very large wildfires exists. The fuel types and loads present in the county make possible, given adverse weather conditions, wildfire events that would overwhelm any suppression efforts using current resources. In such an event, it is probable that large economic losses would be suffered; injury and loss of life is also possible.

It is difficult to estimate potential losses from wildland fire due to the unpredictability of wildfire behavior and the nature of ignition sources. It is impossible to forecast the path a wildfire will take and what type of assets and resources, manmade and ecological, will be at risk. Thus, no value estimates were made for this hazard.

Typically, structures located in forested areas without an adequate defensible space or fire-resistant landscaping have the highest risk of loss. Nevertheless, homes and other structures and infrastructure located in the grasslands or agricultural regions are not without wildfire risk. Grass fires are often the most dangerous due to high rates of spread. Fires in this fuel type are considered somewhat easier to suppress given the appropriate resources; however, they can also be the most destructive.

The cities of Hollister, Buhl, Castleford, Murtaugh, and Hansen are the most vulnerable to wildfires due to vegetation types and proximity to WUIs.

Probability of Future Occurrence:

Based on historic occurrences and trends, wildfires will likely occur multiple times a year throughout the county and have a probability of 100% occurrence in a given year.

Mitigation Actions:

The following Mitigation Actions were developed by the Twin Falls Fire Group to reduce wildfire threats.

Rock Creek Canyon (Twin Falls)- Morrison Drive “Rock Garden Condominiums” limit ingress and egress with high fuel.

Rock Creek Park South West(Twin Falls) - the area has high fuels in the canyon area with limited ingress and egress for first responders.

Auger Falls (Twin Falls) – High Fuel area, limited access, one way ingress and egress.

East Poleline (Twin Falls) – Pilar Falls limited access for ingress and egress for first responders and resident evacuation.

River Road West of Chessmore (Buhl)- removal of cheatgrass, Russian olives, dead fall. Ingress and egress concern.

Canal Road (Buhl)- address sagebrush, cheatgrass, Russian olives, and dead fall. Fuel mitigation and reduction is needed to address heavy fuels. Access to this area is also limited. Ingress and egress concern.

Kanaka Rapids (Buhl)- hillsides below the homes have an abundance of fuels- sagebrush and cheatgrass. Ingress and egress concern.

River Road (Buhl)- excessive fuels, cheatgrass and sagebrush. These area are in the WUI and mitigation is needed to address fuel reduction and mitigation. Ingress and egress concern.

Non-Natural Hazards

Hazard mitigation plans have the option, but are not required, to include hazard assessments of non-natural hazards. This plan includes profiles of non-natural hazards that have impacted or could impact the planning area. The non-natural hazards are profiled but not as fully assessed as the natural hazards are. These hazards are not included in the risk ranking.

Burrowing Rodents- Pocket Gophers

Pocket gophers are burrowing rodents of the Geomyidae family. They are “true” gophers, though several ground squirrels of the Sciuridae family are often called gophers as well. The name “pocket gopher” on its own may be used to refer to any number of subspecies of the family.

All pocket gophers are burrowers. They are larder hoarders, and their cheek pouches are used for transporting food back to their burrows. Their presence is unambiguously announced by the appearance of mounds of fresh dirt approximately 8 inches in diameter. They like moist soil.

Pocket gophers are considered an agricultural pest. They have been known to destroy crops as well as cause the collapse of irrigation canal banks.

Impacts

Impacts from pocket gophers include:

- Damages to lawn and garden,
- Chewed and damaged underground wiring,
- Chewed and damaged irrigation lines,
- Landscape erosion,
- Compromised and leaking ditch banks and earthen dams,
- Potential injury to livestock, and
- Crop damage.

Vector Borne Diseases

"Vector-borne disease" is the term commonly used to describe an illness caused by an infectious microbe that is transmitted to people by blood-sucking arthropods. The arthropods (insects or arachnids) that most commonly serve as vectors include blood sucking insects (i.e., mosquitoes, fleas, lice, biting flies, and bugs), and blood sucking arachnids (i.e., mites and ticks). The term “vector” refers to any arthropod that transmits a disease through feeding activity.

Vectors typically become infected by a disease agent while feeding on infected vertebrates (e.g., birds, rodents, other larger animals, or humans), and then pass on the microbe to a susceptible person or other animal. In almost all cases, an infectious microbe must infect and multiply inside the arthropod before the arthropod is able to transmit the disease through its salivary glands. The most common vector-borne diseases in Idaho are carried by mosquitoes and ticks.

West Nile and other Mosquito-Borne Viruses

West Nile virus (WNV) is transmitted to people, birds, and other animals by the bite of an infected mosquito. This virus can cause serious illness in people of any age but especially in people over the age of 50 or those with other underlying medical conditions. The best form of protection is avoiding mosquito bites.

WNV infections occur in the summer and fall in Idaho when mosquitoes are active. WNV does not occur in northern states when it is too cool for mosquitoes to survive. In southern states with warmer climates and mosquitoes present year-round, the risk of infection may still be present in the winter months.

Impacts

Symptoms of WNV may include a fever, headache, body aches, a rash, and swollen glands, and may last for days or linger for weeks to months. Serious illness infecting the brain or spinal cord can occur in some individuals. Although anyone can experience the more severe form of the disease, it tends to occur in people over the age of 50 or those with other underlying medical conditions or weakened immune systems. The severe symptoms may include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness, and paralysis. These symptoms may last several weeks or more, and neurological effects may be permanent. Usually, symptoms occur from 5 to 15 days after the bite of an infected mosquito. There is no specific treatment for the infection; however, hospitalization and treatment of symptoms may improve the chances of recovery for severe infections. There is no vaccine available for humans.

The Twin Falls County Pest Abatement District has an active surveillance program for WNV. The District treats areas annually that are prone to the virus.

Lyme and other Tick-borne Disease

Tick-borne diseases, including Lyme disease and Rocky Mountain spotted fever, are serious public health problems infecting tens of thousands in the United States each year. The CDC is working closely with local communities, developing innovative control approaches and researching improved diagnostics.⁸

Impacts

Lyme disease is the most common tick-borne disease in the Northern Hemisphere. *Borrelia* is transmitted to humans by the bite of infected ticks belonging to a few species of the genus *Ixodes* ("hard ticks"). Early symptoms may include fever, headache, fatigue, depression, and a characteristic circular skin rash called erythema migrans (EM). Left untreated, later symptoms may involve the joints, heart, and central nervous system. In most cases, the infection and its symptoms are eliminated by antibiotics, especially if the illness is treated early. Delayed or

⁸ <http://www.cdc.gov/ncezid/dvbd/>

inadequate treatment can lead to the more serious symptoms, which can be disabling and difficult to treat.

Vesicular Stomatitis

Vesicular Stomatitis Virus (VSV) is a viral disease that primarily affects cattle, horses, and swine and occasionally sheep, goats, llamas, and alpacas. Humans can also become infected with the disease when handling affected animals; however, this is extremely rare.⁹

Although VSV has been extensively studied at the molecular level, many unknowns remain regarding its epidemiology. VSV is known to be transmitted directly via the transcutaneous or transmucosal route. Certain VSVs have been isolated from sand flies, black flies, mosquitoes, and other insects, suggesting that it could be insect-borne. Seasonal variation (disappearance at the end of the rainy season in tropical areas and at first frost in temperate zones) also supports vector-borne transmission hypotheses that the VSV is a plant virus present in pastures. In endemic areas, VSV maintains long-term, stable cycles between sand flies and subclinical susceptible hosts; evidence of neutralizing antibodies in domestic and wild animals in these areas exists. Morbidity rates vary (up to 90% in a herd); however, there is a low mortality rate.

Impacts

While VSV does not generally cause animals to die, it can still cause economic losses to livestock producers. The disease is particularly significant because its outward signs are similar to (although generally less severe than) those of foot-and-mouth disease, a foreign animal disease of cloven-hoofed animals that was eradicated from the United States in 1929. The clinical signs of VSV are also similar to those of swine vesicular disease, another foreign animal disease. The only way to tell these diseases apart is through laboratory tests.

VSV is recognized internationally as a reportable disease. This means that there are serious economic and regulatory repercussions associated with the diagnosis. When the disease is detected in the United States, some countries may take action to block international trade of U.S. animals and animal products. Interstate movement of animals is also impacted. Premises containing affected animals are quarantined until 21 days after the lesions in the last affected animals have healed. As a result, quarantine periods can be lengthy.

In affected livestock, the incubation period for VSV ranges from 2 to 8 days. Often, excessive salivation is the first sign of the disease. Close examination of the mouth initially reveals blanched and raised vesicles or blister-like lesions on the inner surfaces of the lips, gums, tongue, and/or dental pad. In addition, these blister-like lesions can form on the lips, nostrils, coronary band, prepuce, vulva, and teats. The blisters swell and break, which causes oral pain and discomfort and reluctance to eat or drink. Lameness and severe weight loss may follow. Body temperature may rise immediately before or at the same time lesions first appear.

Dairy cattle often suffer from teat lesions and subsequent mastitis; a severe drop in milk production commonly occurs. Some affected dairy cattle can appear to be normal with no clearly visible signs of illness but may only eat about half of their normal feed intake. If there are no

⁹ http://www.aphis.usda.gov/publications/animal_health/content/printable_version/fs_vesicular_stomatitis_07.pdf

complications (i.e., secondary infection), affected animals typically recover in approximately 2 weeks.

H5N1 “Bird Flu”

The possibility that the bird flu virus (H5N1) may mutate into a new form of human flu that would be easily spread person to person is of greatest concern. Some migratory waterfowl carry the H5N1 virus with no apparent harm but transmit the virus to susceptible domestic poultry. The highly lethal H5N1 outbreak among domestic poultry is widespread and uncontrolled and has directly infected a small number of humans. People who have close contact with infected birds or surfaces that have been contaminated with droppings from infected birds are at risk of becoming infected themselves.

Historical studies indicate that poultry consumption in infected areas is not a risk factor, provided the food was thoroughly cooked and the person was not involved in food preparation. Simply traveling to a country with ongoing outbreaks in poultry or sporadic human cases does not place a traveler at increased risk of infection, provided the person does not visit live poultry markets, farms, or other environments where exposure to diseased birds may occur. More than 200 million birds in affected countries have either died from the disease or were killed in order to try to control the outbreak.

Many Asian countries are currently dealing with bird flu outbreaks, including Cambodia, China, Indonesia, Japan, Laos, South Korea, Thailand, and Vietnam. Bird flu continues to spread geographically from its original focus in Asia. Further spread of the virus along migratory routes of wild water fowl is anticipated. So far, there has been no sustained person-to-person spread of the disease. However, a few isolated cases of possible human-to-human spread between family members are currently under investigation.

The reported symptoms of bird flu in humans range from typical influenza-like symptoms (e.g., fever, cough, sore throat, and muscle aches) to eye infections (conjunctivitis), pneumonia, acute respiratory distress, viral pneumonia, and other severe and life-threatening complications. Diarrhea, vomiting, abdominal pain, chest pain, and bleeding from the nose and gums have also been reported as early symptoms in some cases. In many cases, health deteriorates rapidly leading to a high percentage of death in those infected.

Communicable Diseases (Epidemic/Pandemic)

Epidemic is defined as a disease that appears as new cases in the human population at a rate, during a given time period and location, that substantially exceeds the number expected. It is, thus, a relative term and there is no quantitative criterion for designating a health crisis as an epidemic. In addition to its application to infectious diseases, the term is sometimes used to describe outbreaks of other adverse health effects, including those stemming from chemical exposure, sociological problems, and psychological disorders. A “pandemic” is a worldwide epidemic, while the term “outbreak” may be applied to more geographically limited medical problem as, for instance, in a single community rather than statewide or nationwide. The term “cluster” is often used with reference to non-communicable diseases.

Three factors combine to produce an epidemic include (1) an “agent” that causes the disease, (2) a “host” that is susceptible to the disease, and (3) an “environment” that permits the host to be exposed to the agent. The spread of an infectious disease depends on the chain of

transmission, which includes a source of the agent, a route of exit from the host, a mode of transmission between the susceptible host and the source, and a route of entry into another susceptible host. Modes of spread may involve direct physical contact between the infected host and the new host or airborne spread (i.e., coughing or sneezing). Indirect transmission takes place through vehicles such as contaminated water, food, or intravenous fluids, or through inanimate objects such as bedding, clothes, or surgical instruments, or through a biological vector such as a mosquito or flea.

Health agencies closely monitor for diseases with the potential to cause an epidemic and seek to develop immunizations and eliminate vectors. While this effort has been remarkably successful, there are many diseases of concern, and the human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) pandemic is still not controlled despite more than 25 years of effort since recognition of the disease in 1981.

The Idaho Office of Emergency Management has identified the following as human disease that would contribute to a serious epidemic in the area:

- **Cholera**—A bacterial infection in the small intestine that may cause diarrhea, dehydration, and death. It spreads by ingesting food or water contaminated with feces from infected persons. Cholera outbreaks no longer exist in the United States due to water treatment and sanitation systems.
- **Diphtheria**—A contagious infection caused by bacteria affecting the upper respiratory tract and less often the skin. Coughing, sneezing, or even laughing easily transmits the disease. Complications include breathing problems, heart failure, and nervous system damage. Diphtheria is rare in the United States due to immunizations.
- **HIV/AIDS**—A viral infection transmitted by sexual intercourse, contaminated blood transfusions, or from an infected mother to child during pregnancy or breastfeeding compromises the immune system. This disease is recent compared to other pandemics, first recognized by the CDC in 1981. No current cure exists, although breakthroughs in research are promising.
- **Influenza**—An infectious viral disease of birds and mammals commonly transmitted through airborne aerosols such as coughing or sneezing. Symptoms are chills, headache, fever, nausea, muscle pain, and occasionally pneumonia. New flu strains caused pandemics in the late 19th and 20th centuries, including Russian flu, 1918 Spanish flu, Asian flu, Hong Kong flu, and A/H1N1 or the swine flu. According to the CDC, avian influenza occurs naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species. Avian flu viruses do not normally infect humans. The recent avian flu strains H5N1 and H7N9 have caused human deaths but have not escalated to pandemic proportions.
- **Measles**—A serious respiratory disease caused by a virus. It spreads easily through coughing and sneezing. In rare cases, it can be deadly. The measles, mumps, and rubella vaccine protect against measles.
- **Pertussis** (also known as whooping cough)—A serious respiratory (in the lungs and breathing tubes) infection caused by the pertussis bacteria. It causes violent persistent coughing. Whooping cough is most harmful for young babies and can be deadly. The DTaP vaccine protects against whooping cough.
- **Plague**—A disease that affects humans and other mammals, caused by the bacterium *Yersinia pestis*. Humans usually get plague after rodent fleabite carrying the bacterium or

by handling an infected animal. Plague killed millions of people in Europe during the middle ages. Today, modern antibiotics are effective in treating plague. Without prompt treatment, the disease can cause serious illness or death. Human plague infections continue to occur in the western United States, but significantly more cases occur in parts of Africa and Asia.

- **Polio (or poliomyelitis)**—A disease caused by poliovirus. It can cause lifelong paralysis and can be deadly. The polio vaccine can protect against polio.
- **Q-fever**—A worldwide disease with acute and chronic stages caused by the bacterium *Coxiella burnetii*. Cattle, sheep, and goats are the primary reservoirs, although a variety of species may be infected. During birthing, the organisms are shed in high numbers within amniotic fluids and the placenta. The organism is extremely hardy and resistant to heat, drying, and many common disinfectants. Infection of humans usually occurs by inhalation of these organisms from air that contains barnyard dust contaminated by dried placental material, birth fluids, and excreta of infected animals. Other modes of transmission to humans, including tick bites, ingestion of unpasteurized milk or dairy products, and human-to-human transmission, are rare. Humans are often very susceptible to the disease, and very few organisms may be required to cause infection.
- **Severe acute respiratory syndrome (SARS)**—A viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in 2003. The illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the global outbreak was contained.
- **Small Pox**—A serious, contagious, and sometimes fatal infectious disease. There is no specific treatment for smallpox disease, and the only prevention is vaccination. Smallpox outbreaks occurred from time to time for thousands of years; however, the disease is now eradicated after a successful worldwide vaccination program. The last case of smallpox in the United States was in 1949. The last naturally occurring case in the world was in Somalia in 1977. After the disease was eliminated from the world, routine vaccination against smallpox among the public was stopped because it was no longer necessary for prevention.
- **Tuberculosis (TB)**—A disease caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs but can attack any part of the body, such as the kidney, spine, and brain. If not treated properly, TB can be fatal. TB is spread through the air from one person to another. The bacteria are put into the air when a person with TB coughs, sneezes, speaks, or sings.
- **Typhoid**—A bacterial infection of the intestinal tract and bloodstream. Most of the cases are acquired during foreign travel to underdeveloped countries. The germ that causes typhoid is a unique human strain of salmonella called salmonella typhi.
- **West Nile virus**—A potentially serious illness established as a seasonal epidemic in North America that flares up in the summer and continues into the fall.
- **COVID-19**- Contagious viral disease caused by coronavirus SARS-CoV-2. According to the CDC, the outbreak has been responsible for over 5 million deaths worldwide, with 1,358 deaths in Idaho in 2020 and 2, 407 deaths in 2021. From 2020-2023, 4,788 people dies from COVID-19 in Idaho. Vaccines have since been developed to reduce the spread of COVID-19.

Impacts

All populations in Twin Falls County are susceptible to pandemic outbreaks. The most vulnerable populations include the young, elderly, and those with compromised immune systems.

The South-Central Public Health District has developed and maintains a preparedness and response plan for pandemics.

Structural Fire

Structures in which fires may occur include the following occupancies: residential, non-residential, educational, health care, high-rise, and public assembly. Major causes of structural fires differ in frequency depending on occupancy type but generally include:

- Incendiary/suspicious (arson)
- Heating (including alternative heat sources)
- Cooking
- Open flame (including welding)
- Electrical distribution
- Appliances
- Children playing
- Exposure to other fires.

Structural fires produce high heat, toxic gases, and particulate material as smoke and soot. The heat produced or burning debris can, in turn, cause additional fires. Toxic gases and smoke are extreme hazards in the interior of burning structures and may also be a threat downwind of the structure. Where the building contents include toxic materials, the downwind threat can extend a mile or more. Burning structures may collapse, injuring persons inside or nearby, and floors or roofs may give way beneath those walking on them. Burning structures present electrical, explosion, and flashover hazards, and partially burned structures may themselves be physical hazards, even after the fire is extinguished.

Historical Frequencies

Structural fires are extremely common in Twin Falls County, as they are across the nation. On average, there are approximately 11 deaths per year in the State of Idaho due to structural fires.

Structural fires are a continuing hazard in Twin Falls County. Structural fires may also be associated with other hazards, such as earthquakes. Wildland fires contribute to the ongoing risk to structures in those areas identified within the WUI area.

Impacts

Indirect dollar losses, as is often the case, may be much larger than direct losses. Costs also include those for development and enforcement of fire codes and maintaining fire response capabilities. Firefighters are, additionally, at risk from such hazards as physical exhaustion and cardiac stresses, heat exhaustion or heat stroke, acute and chronic health effects from toxic exposures, hearing damage, and injuries from many sources.

Radiological

A “nuclear event” is defined as an incident involving a nuclear reaction; nuclear fission or nuclear fusion. Examples of nuclear events include nuclear weapons detonations, nuclear reactor incidents, nuclear (fissile) material production, and handling or transportation incidents. Such reactions release heat, radiation, and radioactive contamination in extremely large quantities relative to the amount of material reacting. A nuclear detonation conducted as a part of an attack scenario is, perhaps, the ultimate technological disaster. The hazards of nuclear detonation are well-known and vividly described in FEMA publications¹⁰. They include shock wave, enormous heat, and the spread of fallout (i.e., radioactive contamination). Other nuclear events would not involve a nuclear blast but still have the potential to produce widespread and long-term consequences, as exemplified by the 1986 Chernobyl accident¹¹. Of primary concern is the release of radioactive contamination in the form of airborne gases and particulate material. This radioactive material has the potential to travel great distances, and particulate material eventually is deposited in the environment and incorporated into the food chain. Such contamination may remain hazardous for many years. Direct radiation exposure is also a hazard in relatively close proximity to a nuclear event, as is exposure to high thermal energy. Nuclear events are virtually always caused by intentional or unintentional human actions.

Twin Falls County does not have a current radiological threat. Analysis of the Idaho National Laboratory’s credible accidents does not include a scenario that poses a hazard to Twin Falls County. Twin Falls County does not have nuclear waste transportation routes within its borders.

Impacts

Radiation exposure may occur due to the spread of radioactive contamination. Radioactive contamination is material containing radioisotopes. When such material becomes airborne, it can reach human victims over long distances. When it does so, it may be deposited on clothing and skin and may be internalized by inhalation, ingestion, skin absorption, or through skin breaks. Particularly when contamination is internal, the victim receives radiation exposure. Radiation exposure, whatever the source and depending on its type, intensity, and duration, can cause acute and/or chronic health effects. Acute health effects are those that appear within a relative short time period (i.e., a few hours to a few days) and may include:

- Hair loss,
- Skin burns,
- Gastrointestinal damage leading to nausea, vomiting, diarrhea, dehydration, and loss of appetite, and
- Decreased red and white blood cell and platelet production leading to infection, weakness and fatigue, and uncontrolled bleeding.

Because radioactive contamination presents such hazards, it also can render an area and anything within it uninhabitable until it is removed or has lost its radioactivity through decay. Clean-up of contaminated areas, where possible, is difficult, costly, and may be hazardous to those carrying it out.

¹⁰ e.g., http://www.fema.gov/areyouready/nuclear_blast.shtml

¹¹ <http://www.iaea.org/NewsCenter/Focus/Chernobyl/index.html>

Hazardous Materials

Substances that because of their chemical or physical characteristics are hazardous to humans and living organisms, property, and the environment are regulated by the U.S. Environmental Protection Agency (EPA) and, when transported in commerce, by the DOT.

EPA chooses to specifically list hazardous and extremely hazardous substances rather than provide objective definitions. Hazardous substances, as listed, are generally materials that, if released into the environment, tend to persist for long periods and pose long-term health hazards for living organisms. Conversely, extremely hazardous substances, while also generally toxic, are acute health hazards that, when released, are immediately dangerous to the life of humans and animals and can cause serious damage to the environment. When facilities have these materials in quantities at or above the Threshold Planning Quantity (TPQ), they must submit “Tier II” information to appropriate state and/or local agencies to facilitate emergency planning.

The following are the most common types of hazardous material incidents:

- **Fixed-Facility Hazardous Materials Incident** - Uncontrolled release of materials from a fixed site capable of posing a risk to health, safety, and property. These facilities must notify state and local authorities about the chemicals used or produced so it is possible to identify and prepare for a fixed-facility incident.
- **Hazardous Material Transportation Incident** - An incident resulting in uncontrolled release of materials during transport that can pose a risk to health, safety, and property. Transportations incidents are difficult to prepare for and can occur at any place within the county, although most occur on the interstates, state highways, or major rail lines.

More than 50 facilities in Twin Falls County submitted Tier II information reporting the presence of significant inventories of hazardous materials on site.

A multitude of hazardous materials are routinely transported on all primary and many secondary transportation arteries. Hazardous materials are also very commonly stocked and used by businesses in smaller quantities than those required to submit Tier II reports, as well as by private individuals. Thus, it is reasonably safe to consider the entire county and its inhabitants to be exposed to risk from hazardous materials. Despite their widespread use, however, hazardous materials hazard events are relatively rare and even more rarely cause death, injury, or large-scale property damage. To some extent, this is since such hazards are very effectively addressed by inspections, regulations, codes, and safety procedures, as well as by specialized emergency response training.

Impacts

Because hazardous materials are so widely used, stored, and transported, a hazardous material event could take place almost anywhere. Further, many hazardous materials are used, stored, and transported in very large quantities so the impacts of an event may be widespread and powerful. Regulations and safety practices make such large-scale events unlikely; however, smaller scale incidents may have severe impacts, including:

- Human deaths, injuries, and permanent disabilities,
- Livestock/animal deaths,
- Destruction of vegetation and crops,

- Property damage and destruction,
- Pollution of groundwater, drinking water supplies, and the environment,
- Contamination of foodstuffs, property, land, and structures,
- Temporary or long-term closure of transportation routes and/or facilities,
- Loss of business and industrial productivity,
- Utility outages,
- Clean-up and restoration costs,
- Losses and inconvenience due to evacuation, and
- Loss of valuable chemical products.

The Twin Falls Office of Emergency Management maintains a National Incident Management System and emergency operations/response plans for the entire county.

Civil Disturbances

Civil unrest includes labor unrest, strikes, civil disobedience, demonstrations, riots, and rebellions. Civil disturbances arise from acts of civil disobedience, often spontaneous, involving large groups of people and are generally caused by political grievances and urban economic conflicts.

Riots are generally thought of as being spontaneous, violent events, whereas demonstrations are usually planned events and are usually intended to be non-violent. Riots seem often to be motivated by frustration and anger, usually over some real or perceived unfair treatment of some group. Historically, riots in this and other countries have been initiated, or appear to have been initiated, over such issues as:

- Poor living or working conditions,
- Political oppression,
- Political conflicts,
- Military draft,
- Police actions,
- Taxation,
- Racial conflicts,
- Religious conflicts,
- Sporting events, and/or
- Prison conditions and treatment of prisoners (within prisons).

There are instances, however, where riots have begun during celebrations and other events where the only initiating factor seems to have been the gathering of a crowd of people. Thus, the potential for rioting exists any time people gather together. However, a number of factors are associated with the increased probability one will occur, including:

- Drug and alcohol use,
- Youth of crowd members,
- Low socio-economic status of members,
- High level of emotions,
- A history of rioting on the same or similar previous occasions, and
- Initiating event, person, or persons.

Once violent or illegal activity is initiated, it escalates, possibly at least partly because of the perception that, because all are acting together, there is little probability that any given individual will be arrested or otherwise suffer consequences. Riots may range in scope from a very few people in a small area to thousands over an entire city. Once initiated, large riots are very difficult to suppress, particularly in the United States where law enforcement is constrained by constitutional guarantees as well as personnel limits. Early and decisive action by law enforcement may be effective in suppressing a riot; however, police actions may also lead to further escalation.

There are no recorded riot events for Twin Falls County.

Impacts

Riots may result in loss of life, injury, and permanent disability to participants, bystanders, and law enforcement personnel, as well as looting, vandalism, setting of fires, and other property destruction. Law enforcement, emergency medical services and medical facilities and personnel, firefighting, and other community resources may be overwhelmed and unavailable to the community at large. Transportation routes may be closed, infrastructure and utilities damaged or destroyed, and public buildings attacked, damaged, or destroyed. Social and psychological effects may also cause great impacts. Lingering fear and resentment can be long-lasting and can greatly impair the ability of a community to function politically, socially, and economically.

The Twin Falls Emergency Operations Plan has a response plan for civil disobedience. Law enforcement and emergency response groups have response plans in place for civil disturbances.

Terrorism

According to FEMA, “Terrorism is the use of force or violence against persons or property in violation of the criminal laws of the U.S. for purposes of intimidation, coercion, or ransom.”

Terrorists often use threats to:

- Create fear among the public.
- Try to convince citizens that their government is powerless to prevent terrorism.
- Get immediate publicity for their causes.

Acts of terrorism include threats of terrorism, assassinations, kidnappings, hijackings, bomb scares and bombings, cyber-attacks, and the use of chemical, biological, nuclear, and radiological weapons.

High-risk targets for acts of terrorism include military and civilian government facilities, international airports, large cities, and high-profile landmarks. Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers. Further, terrorists are capable of spreading fear by sending explosives or chemical and biological agents through the mail.

Thus, acts of terrorism are essentially the intentional initiation of the sorts of hazard events that have been discussed in previous sections.

There are no recorded terrorism events for Twin Falls County.

Impacts

Twin Falls County may well be one of the most vulnerable areas in the State of Idaho for Agroterrorism, which involves terrorist acts against crops or livestock. Agriculture is the life blood of Twin Falls County. Acts of Agroterrorism upon the croplands or the Confined Animal Feeding Operations (CAFOs) or dairies in the area would be devastating to the economy of Twin Falls County. While there is a potential for other terrorism targets within the county, the agricultural community poses the most significant target.

The Twin Falls Emergency Operations Plan has a response plan for terrorism. Law enforcement and emergency response groups have response plans in place for terrorism.

Cyber Disruption

Advancements in technology have increased the productivity of our nation and made daily operations and markets reliant on cyber systems. As a result, the United States has become, and will increasingly continue to be, vulnerable to non-traditional attacks, including cyberattacks on information and operations.

Cyberspace is the nervous system for all critical infrastructures and is composed of hundreds of thousands of interconnected computers, servers, routers, switches, and fiber optic cables that allow our critical infrastructures to work. Studies performed by the Government Accounting Office and the Computer Security Institute found that the number of cyber security threats to both public and private sectors are on the rise. In 2000, there were over 20,000 cyberattacks to commercial institutions and 30,000 cyberattacks to federal agencies. The aggressors range from nation-states to unorganized groups or individuals.

The attacks on computer systems can come in the form of viruses, Trojans, worms, spoofs, or hoaxes from virtually anywhere in the world. Computer viruses, ranging from devastating to simply annoying, are sent out daily by organizations and individual hackers, and intermittently by people who fail to protect their computer software.

There are many changes taking place in the computer security arena, including:

- Decline of unauthorized computer system use and reported dollar amount of annual financial losses resulting from security breaches, and
- Virus attacks and denial of service outpaced theft of proprietary information.

Cyberattacks can be divided into two main categories: (1) attacks against data and (2) attacks against physical infrastructure. Because our society is so dependent on technology, a large-scale cyberattack could overwhelm government and/or private-sector resources quickly, as well as threaten lives, property, the economy, and national security.

Attacks against data are more disruptive in nature, including:

- Denial of Service (DoS) attacks (prevents legitimate usage of service or access of data),
- Malware (virus or worm) (can be essentially harmless),
- Unauthorized intrusions (compromise confidentiality or availability), and
- Website defacement (meant to send a message).

Impacts

Cyber-attacks have increased nationwide in recent years and can have an extensive range of impacts, ranging from minimal to significant. Some of the attacks may be malicious and can result in catastrophic damages to the community's cyber infrastructure. Back-up systems, redundancy, heightened awareness, integrity restoration, and recovery will provide a means to adequately manage the consequences of an attack.

Cyber security protection systems are being implemented throughout county and city agencies.

Utility Disruption

An electric power outage (also power failure or power loss) is the loss of the electricity supply to a geographic area. The area of an outage (i.e., scale) can range from a single facility or neighborhood to a multi-state region. The length of the outage is determined by a combination of factors, including the scale of the outage, weather, and redundant equipment and capacity.

A power outage can be described as a blackout if power is lost completely, or as a brownout if the voltage level is below the normal minimum level specified for the system. The reasons for a power outage include a defect in a power station, damage to a power line or other part of the distribution system, a short circuit, or the overloading of electricity mains. 'Load shedding' is a common term for a controlled way of rotating available generation capacity between various districts or customers, thus avoiding complete wide-area blackouts.

Power outages are particularly serious for hospitals and other critical facilities and operations. Every community is extremely reliant upon life-critical medical devices, communications, and electronic information, all of which require reliable, uninterrupted electric power.

The entire energy system is complex and consists of three major parts: generation, transmission, and distribution. The control and communication between these parts are extremely important, as the failure of one part could disrupt the entire system. The energy system is reliant upon the following factors:

- Continual maintenance,
- Equipment replacement and redundancy, and
- Additional high-load capacity.

These factors have to be carefully balanced against operating cost and profit (i.e., these initiatives are expensive); however, the costs cannot be readily pushed down to the consumer due to public pressure and opinion.

Impacts

Power outages can cause a disruption in essential services, including water treatment and alarm systems, emergency response systems, critical facilities, and electrical equipment.

The Twin Falls Emergency Operations Plan includes a response plan for utility failure.

Section 4. Mitigation Goals and Objectives

The overall goals of Hazard Mitigation include:

- 1. Prevent loss of life and reduce personal injury from future hazards.**
 - Identify natural and non-natural hazards that threaten life in Twin Falls County.
- 2. Reduce loss and damage to critical facilities and private and public property.**
 - Implement forward-looking standards, codes, and construction procedures to protect life and property.
 - Implement programs and projects to protect lives by making homes, businesses, essential facilities, critical infrastructure, and other property more resistant to losses from hazards.
- 3. Increase public awareness and preparedness to reduce exposure to hazards.**
 - Conduct educational and outreach programs to various community groups in the county.
 - Provide informational items, partnership opportunities, and funding resource information to assist in implementing mitigation activities.
- 4. Increase communication and cooperation among local, state, and deferral agencies.**
 - Continue developing and strengthening multi-jurisdictional coordination and cooperation in emergency services.
- 5. Incorporate hazard mitigation into county and city plans and policies, when applicable.**
 - Increase public awareness of community hazards and how to reduce hazards by conducting educational and outreach programs to all groups in the county.
 - Provide information, educational opportunities, and funding resource information to implement mitigation actions.

Section 5. Mitigation Actions and Implementation

The core of a strong mitigation plan is identifying and implementing mitigation strategy. The mitigation strategy serves as the map for minimizing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose of the planning process.

This section is organized as follows:

- Status of mitigation actions identified in 2020, and
- New mitigation actions identified during this update process.

The following jurisdictions demonstrated their participation and commitment to the plan by identifying, modifying, and completing projects/actions:

- Twin Falls County
- Twin Falls
- Filer
- Murtaugh
- Kimberly
- Buhl
- Castleford
- Hansen
- Hollister

Prioritization was based on a scale of High, Medium, and Low. Steering committee members ranked all the mitigation actions by hazard as High, Medium, or Low designation. The contributing factors for the planning committee included:

- Estimated cost,
- Benefit to the county or city in relation to the hazards mitigated,
- Number of hazards that would be mitigated, and
- Access to funding source and amount of funding that would likely be available.

Twin Falls County Mitigation Projects

Mitigation Actions					
Mitigation Action: Install wind breaks (trees, fencing) along wind-prone areas.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management, private property owners					
Mitigation Goal: Reduce damage to private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect lives, environment	\$10/linear foot	Grants, local budgets	2030
Status:	Wind breaks have been installed since 2020. Project still relevant.				
Hazard Mitigated: Severe Weather					

Mitigation Actions					
Mitigation Action: Public education campaign to keep public aware of county hazards.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management, health district, fire districts					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Increase self-preparedness	\$7,000	Grants, local budgets	2030
Status:	Education campaign implemented since 2020. Project still relevant.				
Hazard Mitigated: General					

Mitigation Actions					
Mitigation Action: Vegetation management in WUI areas.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management, private property owners, wildfire working group, USDA					
Mitigation Goal: Reduce damage to private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date

H	Ongoing	Protect lives, environment	\$15,000	Grants, local budgets	2030
Status:	Vegetation management implemented since 2020. Project still relevant.				
Hazard Mitigated: Wildfire					
Mitigation Actions					
Mitigation Action: Install high wind warning devices at vulnerable locations within county.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: ITD, Office of Emergency Management					
Mitigation Goal: Reduce damage to private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Complete	Protect lives, environment	\$50,000	Grants, local budgets	Completed (still implementing)
Status:	High Wind devices have been installed on both bridges.				
Hazard Mitigated: Severe Weather					

Mitigation Actions					
Mitigation Action: Promote flood insurance for communities in flood prone areas.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazard.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Outreach programs	\$3,000	Grants, local budgets	2027
Status:	Promotion of flood insurance implemented since 2020. Project still relevant.				
Hazard Mitigated: Flooding					

Mitigation Actions					
Mitigation Action: Mitigate effects of vector/pests (crawdads, quagga and zebra mussels, cyanobacteria, black flies) populations in canals to reduce erosion in banks and around diversion structures.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					

Responsible Agency: Twin Falls Canal Company, USDA, SCPH					
Mitigation Goal: Reduce loss and damage to facilities and private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Implement projects to reduce risk	\$75,000	Grants, local budgets	2028
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Flooding, Pandemic, wildfire					
Mitigation Actions					
Mitigation Action: Upgrade current stormwater diversion and retention areas in flood prone areas to reduce the potential for flooding in communities.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: City Public Works					
Mitigation Goal: Reduce loss and damage to facilities and private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Implement projects to reduce risk	\$1.2M	Grants, local budgets	Ongoing
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Flooding					

Mitigation Actions					
Mitigation Action: Community outreach for the “Great Shake Out.”					
Applicable Jurisdiction: County-wide					
Responsible Agency: Office of Emergency Management					
Mitigation Goal: Reduce loss and damage to facilities and private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
L	Ongoing	Community outreach	\$1,000	Grants, local budgets	Ongoing
Status:	Outreach implemented since 2020. Project still relevant.				
Hazard Mitigated: Earthquake					

Mitigation Actions					
Mitigation Action: Develop a list of vulnerable structures and bridges and implement protective measures, as needed.					

Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management					
Mitigation Goal: Reduce loss and damage to facilities and private and public property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
L	Ongoing	Protect the community from hazards	\$250,000	Grants, local budgets	Ongoing
Status:	Inspections on various structures has occurred since 2020. Project still relevant.				
Hazard Mitigated: Earthquake, flooding, severe weather					

Mitigation Actions					
Mitigation Action: Increase community awareness on properly reducing fuels on private property through outreach programs.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Fire Districts, Office of Emergency Management					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Community outreach	\$10,000	Grants, local budgets	Ongoing
Status:	Outreach programs have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Wildfire					

Mitigation Actions					
Mitigation Action: Promote Fire Wise and Ready Set Go Public Education throughout county.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Fire Districts, Office of Emergency Management					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Community outreach	\$1,000	Grants, local budgets	Ongoing
Status:	Fire wise promoted since 2020. Project still relevant.				
Hazard Mitigated: Wildfire					

Mitigation Actions					
Mitigation Action: Develop a listing of roads, bridges, cattle guards, culverts, and other limiting conditions and incorporate improvements into Highway District Transportation Plans.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Fire Districts, Highway District					
Mitigation Goal: Prevent loss of life and personal injury from future hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
L	Ongoing	Protect community	\$6,000	Grants, local budgets	2020
Status:	List in progress since 2020. Project still relevant.				
Hazard Mitigated: Wildfire, flooding, severe weather, landslide					

Mitigation Actions					
Mitigation Action: Implement community outreach programs to focus on educating the community about health-related threats such as sexually transmitted diseases, vaccination preventable diseases, food-borne illnesses, opioid addiction, and septic systems.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Health District					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Community outreach	\$20,000	Grants, local budgets	Ongoing
Status:	Various outreach programs have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Pandemic					

Mitigation Actions					
Mitigation Action: Implement safety measures in schools and critical facilities for responsiveness to terror threat.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: School Districts					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazard.					

Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Protect loss of life	\$10,000	Grants, local budgets	Ongoing
Status:	Various safety measures have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Terrorism					

Mitigation Actions					
Mitigation Action: Placement of information and warning signs in open spaces.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Forest Service, BLM, IDL, IDT					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazard.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
L	Ongoing	Reduce loss of life and injury	\$15,000	Grants, local budgets	Ongoing
Status:	Signs have been purchased since 2020. Project still relevant.				
Hazard Mitigated: Lightning, Wildfire, Landslide, Earthquake					

Mitigation Actions					
Mitigation Action: Provide water conservation education and focus on neighborhoods that use irrigation water. Provide education on drought resistance landscaping to public.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: U of I extension, Office of Emergency Management, Canal Companies					
Mitigation Goal: Increase public awareness and preparedness to reduce exposure to hazard.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
L	Ongoing	Increase drought resistance	\$5,000	Grants, local budgets	Ongoing
Status:	Various education programs have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Drought					

Mitigation Actions					
Mitigation Action: Create stormwater collection system to divert water away from developments.					

Applicable Jurisdiction: Kimberly, Buhl					
Responsible Agency: City Public Works					
Mitigation Goal: Reduce damage to facilities and property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect property	\$300,000	Grants, local budgets	2030
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: General					

Mitigation Actions					
Mitigation Action: Protect city drinking water system from freezing.					
Applicable Jurisdiction: Buhl, Hansen, Castleford					
Responsible Agency: City Public Works					
Mitigation Goal: Reduce damage to facilities and property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Protect property	\$600,000	Grants, local budgets	2028
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Severe Weather					

Mitigation Actions					
Mitigation Action: Develop and upgrade stormwater retention systems to reduce flooding in developed areas. Install drywells where applicable.					
Applicable Jurisdiction: Murtaugh, Burley					
Responsible Agency: City Public Works					
Mitigation Goal: Reduce loss and damage to facilities and property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect property	\$200,000	Grants, local budgets	2028
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Flooding					

Mitigation Actions					
Mitigation Action: Fuel reduction in WUI areas.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Fire District					
Mitigation Goal: Prevent loss of life and reduce injury from future hazard.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect property	\$50,000	Grants, local budgets	Ongoing
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Wildfires					

Mitigation Actions					
Mitigation Action: Replace waterlines in cemetery to prevent lines from breaking and causing flooding.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: City Public Works					
Mitigation Goal: Prevent loss of life and reduce injury from future hazard.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect property	\$250,000	Grants, local budgets	2030
Hazard Mitigated: Flooding					

Mitigation Actions					
Mitigation Action: Divert stormwater retention flow away from wastewater lines.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: City Public Works					
Mitigation Goal: Reduce loss and damage to facilities and property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
H	Ongoing	Protect property	\$150,000	Grants, local budgets	2030
Status:	Various projects have been implemented since 2020. Project still relevant.				

Hazard Mitigated: Terrorism, flooding

Mitigation Actions					
Mitigation Action: Upgrade failing/leaking drinking water system.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: City Public Works					
Mitigation Goal: Prevent loss of life and reduce injury from future hazard.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect property, health	\$500,000	Grants, local budgets	2030
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Flooding, Health					

Mitigation Actions					
Mitigation Action: Identify and mitigate dangerous intersections on roadways.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management, ITD					
Mitigation Goal: Prevent loss of life and reduce injury from future hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
L	Ongoing	Protect loss of life	\$50,000	Grants, local budgets	2030
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: General					

Mitigation Actions					
Mitigation Action: Implement and support Safe Driving campaign. Reduce speed signage throughout cities.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management, ITD, Health District.					
Mitigation Goal: Incorporate hazard mitigation into plans and policies.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Increase public awareness	\$15,000	Grants, local budgets	Ongoing
Status:	Campaign has been implemented since 2020. Project still relevant.				
Hazard Mitigated: General					

Mitigation Actions					
Mitigation Action: Purchase and install emergency generators in Medical Shelters, evacuation areas, critical living facilities					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Office of Emergency Management					
Mitigation Goal: Prevent loss of life and reduce injury from future hazards.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Protect loss of life	\$400,000	Grants, local budgets	2030
Status:	Some have been purchased since 2020. Project still relevant.				
Hazard Mitigated: Severe Weather					

Mitigation Actions					
Mitigation Action: Evaluate, upgrade, and harden critical utilities (power, sewer, water, gas).					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: City Public Works, power companies, gas companies					
Mitigation Goal: Reduce loss and damage to facilities and property.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date

H	Ongoing	Protect property and loss of life	\$10,000,000	Grants, local budgets	2030
Status:	Various projects have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Severe Weather, Flooding, Earthquake, Landslide					
Mitigation Actions					
Mitigation Action: Outreach programs for civil disobedience and terror attacks.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Law enforcement, OEM					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	Ongoing	Reduce loss of life	\$5,000	Grants, local budgets	2030
Status:	Programs have been implemented since 2020. Project still relevant.				
Hazard Mitigated: Terrorism					

Mitigation Actions					
Mitigation Action: Landslide protection along river					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: OEM, Soil Conservations, USDA, IDWR, IDT					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$55,000	Grants, local budgets	2028
Hazard Mitigated: Landslide, earthquake, severe weather					

Mitigation Actions					
Mitigation Action: Develop Emergency Operations Center and maintain.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: OEM, Red Cross					
Mitigation Goal: Reduce loss of life.					

Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$30,000	Grants, local budgets	2030
Hazard Mitigated: Severe Weather, earthquake, wildfire, general					

Mitigation Actions					
Mitigation Action: Conduct canal inspection to identify flood prone areas. Mitigate erosion areas.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Canal companies,					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$10,000	Grants, local budgets	2028
Hazard Mitigated: Severe Weather, Flooding					

Mitigation Actions					
Mitigation Action: Treat power poles in high wildfire areas, reduce vegetation around poles.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Fire protection, power companies					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$75,000	Grants, local budgets	2030
Hazard Mitigated: Wildfire					

Mitigation Actions					
Mitigation Action: Install evacuation sirens in small towns.					
Applicable Jurisdiction: Murtaugh, Hollister, Filer, Castleford, Hansen					
Responsible Agency: OWM					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$65,000	Grants, local budgets	2030
Hazard Mitigated: Hazardous Materials, Flooding, Earthquake, Severe Weather, Wildfire					

Mitigation Actions					
Mitigation Action: Harden and improve communication systems in rural areas.					
Applicable Jurisdiction: Twin Falls County, Twin Falls, Murtaugh, Hollister, Filer, Buhl, Kimberly, Castleford, Hansen					
Responsible Agency: Fire protection, OEM, Red Cross					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$125,000	Grants, local budgets	2030
Hazard Mitigated:, Flooding, Earthquake, Landslide, Wildfire					

Mitigation Actions					
Mitigation Action: Update Comprehensive Plan to include hazard mitigation codes, community safety and structure requirements.					
Applicable Jurisdiction: Hollister					
Responsible Agency: City council					
Mitigation Goal: Protect property, reduce loss of life					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$100,000	Grants, local budgets	2030
Hazard Mitigated: Flooding, Wildfire, Drought,					

Mitigation Actions					
Mitigation Action: Rebuild and stabilize Balanced Rock Canyon.					
Applicable Jurisdiction: Twin Falls County					
Responsible Agency: USDA					
Mitigation Goal: Protect property, reduce loss of life					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$100,000	Grants, local budgets	2030
Hazard Mitigated: Landslide					

Mitigation Actions					
Mitigation Action: Treat cheatgrass for fuels reduction					
Applicable Jurisdiction: Twin Falls County					
Responsible Agency: Idaho Fish and Game, US Forest Service, Pheasants Forever, Landowners					
Mitigation Goal: Protect property					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$225,000	Grants, local budgets	2026
Hazard Mitigated: Wildfire					

Mitigation Actions					
Mitigation Action: Riparian restoration					
Applicable Jurisdiction: Twin Falls County					
Responsible Agency: Idaho Fish and Game, BLM					
Mitigation Goal: Protect property					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$47,000	Grants, local budgets	2027
Hazard Mitigated:, Flooding, Wildfire, Landslide					

Mitigation Actions					
Mitigation Action: Plant sagebrush and native plants in previous fire areas					
Applicable Jurisdiction: Twin Falls County					
Responsible Agency: Idaho Fish and Game, BLM					
Mitigation Goal: Protect property					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$69,750	Grants, local budgets	20208
Hazard Mitigated:, Flooding, Earthquake, Landslide, Wildfire					

Mitigation Actions					
Mitigation Action: Snow fence installation along major roadways					
Applicable Jurisdiction: Hollister					
Responsible Agency: IDT, City of Hollister					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$35,000	Grants, local budgets	2026
Hazard Mitigated: Transportation, Severe Storms					

Mitigation Actions					
Mitigation Action: Emergency notification equipment and supplies (PPE, radios, etc)					
Applicable Jurisdiction: Three Creek Fire area, Saylor Fire area					
Responsible Agency: OEM, fire departments					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$35,000	Grants, local budgets	2026
Hazard Mitigated: wildfires, severe storms, earthquakes					

Mitigation Actions					
Mitigation Action: Bridge at Rock Creek Park for evacuation.					
Applicable Jurisdiction: Kimberly					
Responsible Agency: IDT, City of Twin Falls					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$250,000	Grants, local budgets	2028
Hazard Mitigated: Wildfires, Severe Storms					

Mitigation Actions					
Mitigation Action: Additional traffic control to reduce fatalities.					
Applicable Jurisdiction: Kimberly					
Responsible Agency: IDT, City of Kimberly					
Mitigation Goal: Reduce loss of life.					
Priority	Status	Benefit to Jurisdiction	Est. Cost	Funding Source	Target Date
M	New	Reduce loss of life	\$125,000	Grants, local budgets	2027
Hazard Mitigated: Transportation					

Section 6. Plan Integration

Many of the mitigation actions identified above are intertwined with other plans and policies within the counties and cities. It is important to ensure coordination, integration, and consistency within all the plans. These plans fall into the following general categories:

- Local capital improvement plans and other budget documents. These include infrastructure projects such as stormwater systems, water supplies, warning sirens, and communications equipment.
- Regulations, agreements, and related procedures.
- Existing emergency operating or response plans.

Mitigation planning is on a different schedule than comprehensive planning, with most comprehensive plans likely to be updated no more frequently than once per decade.

While the mitigation plan was not specifically referenced in most participant plans, some of the mitigation recommendations are included as comprehensive plan policies.

Stormwater management and emergency services are other common themes in many local comprehensive plans. Even so, greater effort is needed to ensure that the AHMP is considered during other local planning efforts and vice versa.

As the mitigation plan strategies reflect, Twin Falls County and incorporated cities will continue to work with the Planning and Zoning Department and local municipalities to encourage coordination and consistency between comprehensive planning and the hazard mitigation plan and provide instruction on how to incorporate mitigation strategies into their comprehensive plans and other planning mechanisms.

Twin Falls County and the incorporated cities encourage the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program. Through their resolution of adoption as well as their participation on the planning committee, each jurisdiction is aware of and committed to incorporating the risk assessments and mitigation strategies contained herein. It is anticipated that the research, local knowledge, and documentation of hazard conditions coalesced in this document will serve as a tool for decision-makers as new policies, plans, and projects are evaluated.

There are several planning processes and mechanisms in Twin Falls County that will either use the risk assessment information presented in this document to inform decisions or will integrate the mitigation strategy directly into capital improvement, infrastructure enhancement, and training projects; prevention campaigns; and land use and development plans. Although not inclusive, the following is a list of mechanisms available to each jurisdiction for incorporating the mitigation requirements.

Twin Falls County Mechanisms:

1. Comprehensive Plan
2. Transportation Plan
3. Emergency Operations Plan
4. Building Codes and Ordinances
5. Department Budgets
6. Site Master Plan (wastewater treatment, landfill, etc.).

Incorporated City Mechanisms:

1. Comprehensive Plan
2. Transportation Plan
3. City Budgets
4. Building Codes and Ordinances.

The state hazard mitigation plan provides a framework for participating jurisdictions to build from. Counties typically have their own HMPs. As for most counties in Idaho, Twin Falls County and participating jurisdictions rely on the County HMP for guidance on prioritizing and funding hazard mitigation projects when developing budgets.

Twin Falls County has adopted ordinances that relate to hazard mitigation including an open burning ordinance, ordinances for disaster management, ambulance services, the emergency communications system, and an ordinance for the prohibition of irrigation water on county roadways.

The City of Buhl has adopted ordinances that relate to hazard mitigation including ordinances for the fire department, fire code, fireworks, and open burning. Other ordinances that have been adopted include, land use limitations, police regulations, traffic regulations, and irrigation water regulations.

The City of Castleford has adopted ordinances that related to hazard mitigation including ordinances for fireworks, open burning, and weed control.

The City of Filer has adopted ordinances that related to hazard mitigation including ordinances for burning restrictions, weed control, pest control, fireworks, and police regulations.

The City of Hansen has adopted open burning ordinances, building codes and regulations, and land use, including floodplain regulations. Ordinances for flood loss focus on defining flood hazard areas, reduce the annual costs of flood insurance, and minimize public and private losses due to flooding.

The City of Hollister has adopted similar ordinances that related to hazard mitigation including ordinances for fair housing, and land usage.

Murtaugh only has ordinances that oversee land use.

Kimerly has well developed city codes and ordinances to implement hazard mitigation including land usage, weed control, burning restrictions, public peace, morals, and welfare and fire protection. Kimberly also has regulations overseeing water supply management to protect their water supply.

Twin Falls has to most robust ordinance and codes in the county. Codes include weed control, fire protection, land usage, water conservation, fireworks, water supply protection, flood protection, and have developed a Comprehensive Plan to guide development and reduce hazard impacts to citizens.

Opportunities for each jurisdiction for increasing effectiveness of these capabilities include continued education and encouragement to know and implement these ordinances, encouraging the update and public availability of their Comprehensive Plan (or developing them if one does not exist), encouragement of involvement in NFIP. Challenges include the funding and personnel to update plans and ordinances and the dispersion of information to the community.

Table 6.1. Mitigation Capability Assessment

<i>Twin Falls County Local Mitigation Capability Assessment</i>						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
Twin Falls County Planning and Zoning	Floodplain Management	Twin Falls County Building Dept. 630 Addison Ave. W Twin Falls, ID 83301 208-736-9490		X		Establish and enforce building codes
Twin Falls County Planning and Zoning	Landslide Management	Twin Falls County Building Dept. 630 Addison Ave. W Twin Falls, ID 83301 208-736-9490		X		Establish and enforce building codes
Twin Falls County Planning and Zoning	Comprehensive Plan	Twin Falls County Building Dept. 630 Addison Ave. W Twin Falls, ID 83301 208-736-9490		X		Physical and economic planning
Southern Idaho Solid Waste	Solid waste transfer station	Twin Falls County Solid Waste Department 2186 Orchard Dr E Twin Falls, ID 8331 208-734-3139		X		Responsible for removal of debris after an event
Road and Bridge Department	Transportation	Transportation Department 626 Eastland Dr S Twin Falls, ID 83301 208-736-3088		X		Clean gutter, storm drains, and culverts as needed
Idaho Department of Water Resources	Stream Channel Protection Program	Western Regional Office 2735 Airport Way Boise, ID 83705 (208)-334-2190			X	Oversees activities within floodplains
Idaho Department of Water Resources	Floodplain Management	Western Regional Office 2735 Airport Way Boise, ID 83705 (208)-334-2190			X	Oversees activities within floodplains

Table 6.1. (continued)

<i>Twin Falls County Local Mitigation Capability Assessment</i>						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

<i>City of Twin Falls Local Mitigation Capability Assessment</i>						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Twin Falls Planning and Zoning	Floodplain Management	Twin Falls Planning and Zoning 203 Main Avenue East Twin Falls, ID 83301 208-735-7267		X		Establish and enforce building codes
City of Twin Falls Planning and Zoning	Landslide Management	Twin Falls Planning and Zoning 203 Main Avenue East Twin Falls, ID 83301 208-735-7267		X		Establish and enforce building codes
City of Twin Falls Planning and Zoning	Comprehensive Plan	Twin Falls Planning and Zoning 203 Main Avenue East Twin Falls, ID 83301 208-735-7267		X		Physical and economic planning

Table 6.1. (continued)

<i>City of Twin Falls Local Mitigation Capability Assessment</i>						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Twin Falls Street Department	Transportation	Street Department 159 Wall Avenue Twin Falls, ID 83301 208-736-2226		X		Clean gutter, storm drains, and culverts as needed
Idaho Department of Water Resources	Stream Channel Protection Program	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033			X	Oversees activities within floodplains
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033			X	Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

<i>City of Buhl Local Mitigation Capability Assessment</i>						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Buhl	Buhl City Ordinances and State Codes	Buhl Clerk's Office 203 Broadway Av. North Wind Inc Buhl, ID 88316 208-543-5125	X			
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033			X	Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

City of Castleford Local Mitigation Capability Assessment						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Castleford	Castleford Comprehensive Plans	City Office 475 Main Street Castleford, ID 83321 208-537-6544	X			
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033			X	Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

<i>City of Hollister Local Mitigation Capability Assessment</i>						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Hollister	Government	City of Hollister 2392 Main Street Twin Falls, ID 83301 208-655-4225	X			
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033			X	Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

City of Kimberly Local Mitigation Capability Assessment						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Kimberly	City Codes	City Clerk 242 Highway 30 E Kimberly, ID 83341 208-423-4151	X			
City of Kimberly Planning and Zoning	Comprehensive Plan	Planning and Zoning 242 Highway 30 E Kimberly, ID 83341 208-423-4151		X		Physical and economic planning
City of Kimberly Street Department	Transportation	Public Works 242 Highway 30 E Kimberly, ID 83341 208-423-4151		X		Clean gutter, storm drains, and culverts as needed
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033			X	Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

City of Murtaugh Local Mitigation Capability Assessment						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Murtaugh	Government	City Office 104 South 4 Murtaugh, ID 83344 208-432-6682	X			
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033		X		Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

City of Filer Local Mitigation Capability Assessment						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Filer	City Ordinances and State Codes	City of Filer 300 Main Street Filer, ID 83328 208-326-5000	X			
City of Filer	Comprehensive Plan	City of Filer 300 Main Street Filer, ID 83328 208-326-5000		X		Physical and economic planning
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033		X		Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

Table 6.1. (continued)

City of Hansen Local Mitigation Capability Assessment						
Agency Name	Programs, Plans, Policies, Regulations, Funding, or Practices	Entity Contact, Address, Phone Contact, Address, Phone	Effect on Loss Reduction			Comments
			Support	Facilitate	Hinder	
City of Hansen	City Ordinances and State Codes	City of Hansen 388 Main Street Hansen, ID 83334 208-423-5158	X			
Idaho Department of Water Resources	Floodplain Management	Southern Regional Office 650 Addison Ave Twin Falls, ID 83301 208-736-3033		X		Oversees activities within floodplains
Twin Falls County Office of Emergency Management	Twin Falls County Emergency Operations Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Outlines emergency response procedures during and after a disaster. City will rely on county for support if needed.
Twin Falls County Office of Emergency Management	All- Hazard Mitigation Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.
Twin Falls County Office of Emergency Management	Community Wildfire Protection Plan	Twin Falls County OEM 630 Addison Ave. W Twin Falls, ID 83301 208-736-4234		X		Guides planners during hazard mitigation activities. Cities will rely on county for support if needed.

NFIP Continuity Strategy

Twin Falls County, as well as the Cities of Twin Falls, Hansen, and Filer, participate in the NFIP.

Participation in NFIP and subsequent adoption of the International Building Codes, or more stringent local building codes, provide basic guidelines to communities on how to regulate development. When a county/city participates in the NFIP it enables property owners in the county to insure against flood losses. By employing wise floodplain management, a participating entity can protect its citizens against much of the devastating financial loss resulting from flood disasters. Careful local management of development in the floodplains results in construction practices that can reduce flood losses and the high costs associated with flood disasters to all levels of government

Twin Falls County has no communities within the 100-year flood plain hazard areas that are not participating in the NFIP. Twin Falls County has no communities under suspension or revocation of participation in the NFIP.

An important part of being an NFIP community is the availability of low-cost flood insurance for those homes and business within designated floodplains, or in areas that are subject to flooding but that are not designated as Special Flood Hazard Areas.

Potential reasons for continuing low participation in the program are:

- Current cost of insurance is prohibitive,
- A lack of knowledge about the existence of the availability of low-cost flood insurance, and/or
- Home and business owners are unaware of their vulnerability to flood events.

Table 6.2. NFIP Summary

NFIP Participation Category	Twin Falls County	City of Twin Falls	City of Hansen	City of Filer
Date of current FIRM	9/26/2008	9/26/2008	9/26/2008	9/26/2008
Number of policies	18	45	1	0
Number Claims Paid	1	10	0	0
\$ Total Claims Paid	\$5,672	\$20,524	\$732	0
Repetitive Loss	0	0	0	0

The last two reasons can be addressed through public education. The first could be addressed by all communities in the county taking advantage of the CRS. To encourage communities to go beyond the minimum requirements and further prevent and protect against flood damage, the NFIP established the CRS. To qualify for a CRS, communities can do things like make building codes more rigorous, maintain drainage systems, and inform residents of flood risk.

In exchange for becoming more flood ready, the community's residents are offered discounted premium rates. Based on the community's CRS ratings, they can qualify for up to a 45% discount of annual flood insurance premiums. FEMA has developed FIRMs for the following streams and rivers in Twin Falls County:

- Deep Creek
- Cottonwood Creek
- Hot Creek
- Lost Creek
- Perrine Coulee
- Rock Creek
- Salmon Falls Creek
- Shoshone Creek
- Snake River.

The cities of Buhl, Kimberly, Murtaugh, Hollister, and Castleford do not have any FEMA flood zones identified within city limits and do not participate in NFIP.

Twin Falls County, Twin Falls, Filer, and Hansen will continue to participate in NFIP insurance by increasing public awareness of the availability of NFIP, enforcing existing building codes or adopting more stringent building codes for structures in floodplains, and maintaining drainage systems. New developments in Twin Falls must adhere to City Codes 10-11-9, Floodplain Regulations and 10-12-5-8, Subdivisions within a Floodplain prior to building.

New developments in Twin Falls County must adhere to 2012 International Residential Code and International Building Codes, which cover flood hazard areas.

New developments in Hansen must adhere to City Codes 10-11-9, Floodplain Regulations and 10-12-5-8, Subdivisions within a Floodplain prior to building.

Section 7. Plan Maintenance

The HMP maintenance process includes a schedule for annual monitoring and evaluation of the programmatic outcomes established in the plan and for producing a formal plan revision every 5 years.

Formal Review Process

The HMP may be reviewed on an annual basis by the Twin Falls County Office of Emergency Management Coordinator and reviewed and revised every 5 years by the Mitigation Committee to determine the effectiveness of programs and to reflect changes that may affect mitigation priorities. The Emergency Management Coordinator (or designee) will be responsible for contacting the Committee members and organizing the review. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the plan. The Committee will review the goals and action items to determine their relevance to changing situations in the county as well as changes in Federal policy, and to ensure they are addressing current and expected conditions. The Committee will also review the risk assessment portion of the plan to determine if this information should be updated or modified, given any new available data. The organizations responsible for the various action items will report on the status of the projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised or removed.

The Emergency Management Coordinator (or designee) will be responsible for ensuring the updating of the plan. The Coordinator will also notify all holders of the plan and affected stakeholders when changes have been made. The updated plan will be submitted to the State of Idaho's BHS Mitigation Program and to FEMA every 5 years for review.

Continued Public Involvement

The Twin Falls County Office of Emergency Management is dedicated to involving the public directly in the review and updates of the HMP. The Coordinator is responsible for the review and updates of the plan. The public will also have the opportunity to provide input into plan revisions and updates. Copies of the HMP will be kept by appropriate county departments and outside agencies.

Public meetings will be held when deemed necessary by the Coordinator. The meetings will provide a forum where the public can express concerns, opinions, or new alternatives that can then be included in the plan. The Board of County Commissioners will be responsible for using county resources to publicize the public meetings and maintain public involvement.

To further facilitate continued public involvement in the planning process, the county will ensure that:

- Copies of the plan will be catalogued and kept on hand at all public libraries. The Twin Falls County Office of Emergency Management will keep a copy of the plan on hand at their office for review and comment by the public.

- The Twin Falls County Office of Emergency Management will conduct outreach activities after a disaster event to remind members of the importance of mitigation and to solicit mitigation ideas to be included in the plan.
- A public meeting will be held annually to provide the public with a forum for discussing concerns, opinions, and ideas with the Mitigation Steering Committee.

Monitoring, Evaluation, and Updating the Plan

To ensure it continues to provide an appropriate path for risk reduction throughout the county, it is necessary to regularly evaluate and update the HMP. The Twin Falls County Office of Emergency Management will be responsible for monitoring the status of the plan and gathering appropriate parties to report on the status of mitigation actions. The County Mitigation Steering Committee will convene on an annual basis to determine the progress of the identified mitigation actions. The Mitigation Steering Committee will also be an active participant in the next plan update. As the HMP matures, new stakeholders will be identified and encouraged to join the existing Mitigation Steering Committee.

The Twin Falls County Office of Emergency Management is responsible for contacting Committee members and organizing the annual meeting. The Committee's responsibilities include:

- Annually review each goal and objective to determine its relevance and appropriateness.
- Monitor and evaluate the mitigation strategies in this plan to ensure the document reflects current hazard analyses, development trends, code changes, and risk analyses and perceptions.
- Ensure the appropriate implementation of annual status reports and regular maintenance of the plan. The Committee will hear progress reports from the parties responsible for the various implementation actions to monitor progress.
- Create future action plans and mitigation strategies. These should be carefully assessed and prioritized using the BCA methodology that FEMA has developed.
- Ensure the public is invited to comment and be involved in mitigation plan updates.
- Ensure that the county complies with all applicable Federal statutes and regulations during the periods for which it receives grant funding, in compliance with 44 Code of Federal Regulations (CFR).
- Reassess the plan in light of any major hazard event. The committee will convene within 45 days of any major event to review all applicable data and to consider the risk assessment, plan goals, objectives, and action items given the impact of the hazard event.
- Review the hazard mitigation plan in connection to other plans, projects, developments, and other significant initiatives.
- Coordinate with appropriate municipalities and authorities to incorporate regional initiatives that transcend the boundaries of the county.
- Update the plan every 5 years and submit for FEMA approval.
- Amend the plan whenever necessary to reflect changes in State or Federal laws and statutes required in 44 CFR.

The 5-Year Action Plan

This section outlines the implementation agenda that the Mitigation Committee should follow 5 years following adoption of this plan, and then every 5 years thereafter. The Mitigation Steering Committee, led by the Twin Falls County Office of Emergency Management, is responsible to ensure the AHMP is updated every 5 years.

The Committee will consider the following schedule as an action plan for the first 5-year planning cycle:

Year 0:

- **2025:** Update AHMP, including a series of Mitigation Steering Committee meetings and public meetings. Submit 2020 AHMP for FEMA approval.

Year 1:

- **June – July 2026:** Prepare for and promote first annual plan review and public meetings.
- **August 2026:** Reconvene Committee for first annual Mitigation Steering Committee meeting. Introduce the concept of mitigation plan integration with other planning documents. Host first annual public meeting.

Year 2:

- **June – July 2027:** Prepare for and promote second annual plan review and public meetings.
- **August 2027:** Reconvene Committee for second annual Mitigation Steering Committee meeting. Review plan integration efforts. Host second annual public meeting.

Year 3:

- **June – July 2028:** Prepare for and promote third annual plan review and public meetings.
- **August 2028:** Reconvene Committee for third annual Mitigation Steering Committee meeting. Review plan integration efforts. Host second annual public meeting.

Year 4:

- **June – July 2029:** Prepare for and promote fourth annual plan review and public meetings.
- **August 2029:** Reconvene Committee for fourth annual Mitigation Steering Committee meeting. Review plan integration efforts. Host fourth annual public meeting.

Year 5:

- **January - September 2030:** Update 2025 HMP, including a series of Mitigation Steering Committee meetings and public meetings.
- **October 2030:** Submit 2030 HMP for FEMA approval. Repeat.

It should be noted that this schedule can be modified as necessary and does not include any meetings and/or activities that would be necessary following a disaster event (which would include reconvening the Mitigation Steering Committee within 45 days of a disaster or emergency to determine what mitigation projects should be prioritized during the community

recovery). If an emergency meeting of the Mitigation Steering Committee occurs, this proposed schedule may be altered to fit any new needs.

Annual Mitigation Steering Committee Meetings

During each annual Mitigation Steering Committee meeting, the Committee will be responsible for a brief evaluation of the HMP and to review the progress on mitigation actions.

Plan Evaluation

To evaluate the plan, the Mitigation Steering Committee should answer the following questions:

- Are the goals and objectives still relevant?
- Is the risk assessment still appropriate, or has the nature of the hazard and/or vulnerability changed over time?
- Are current resources appropriate for implementing this plan?
- Have lead agencies participated as originally proposed?
- Has the public been adequately involved in the process? Are their comments being heard?
- Have departments been integrating mitigation into their planning documents?

If the answer to each of the above questions is “yes,” the plan evaluation is complete. If any questions are answered with a “no,” the identified gap must be addressed.

Review of Mitigation Actions

Once the plan evaluation is complete, the Committee must review the status of the mitigation actions. To do so, the Mitigation Steering Committee should answer the following questions:

- Have the mitigation actions been implemented as planned?
- Have outcomes been adequate?
- What problems have occurred during the implementation process?

Meeting Documentation

Each annual Mitigation Steering Committee meeting must be documented, including the plan evaluation and review of mitigation actions. Mitigation actions have been formatted to facilitate the annual review process.

Implementation through Existing Programs

Hazard mitigation practices must be incorporated within existing plans, projects, and programs. Therefore, the involvement of all departments, private non-profits, private industry, and appropriate jurisdictions is necessary in order to find mitigation opportunities within existing or planned projects and programs. To execute this, the Twin Falls County Office of Emergency Management will assist and coordinate resources for the mitigation actions and provide strategic outreach to implement mitigation actions that meet the goals and objectives identified in this plan.

Attachment 1. Meeting Minutes

2025 AHMP meeting list to address 2025 Twin Falls County AHMP revision:

- 2-11 LEPC meeting "Start UP" meeting to address AHMP update with Saige Ballock Dixon and LEPC members: industry, hospital, SCHPHD, schools, fire, LE, EMS, elected officials, volunteer agencies, OOA, etc.
- 3-14 Office work and meeting with Susan Cleverly, IOEM Mitigation Section Chief and ISU Zachery Lifton to address "rumbling" issues in Melon Valley. *NOTES: No Magna moving, no active fault lines, no hydrological anomalies, ISU would like to address any possible artificial or natural causes; gas lines in the Snake River, possible irrigation pumps etc. Another reason for the rumbling could be natural springs streaming through basalt rock. Information was shared with homeowner TB and any site visit or the use of seismic monitors being set up was declined by homeowner.* DHS-CWMD Intelligence Division Webinar, Idaho CID meeting, and WECMD Board meeting.
- 3-19 CWPP Fire meeting with county/city fire departments and Tyre Holfeltz to address the CWPP revision/update.
- 3-21 Office work and meetings with Mitchell Brooks, Twin Falls Fire to address the AHMP.
- 3-25 Owyhee AHMP Planning meeting with those planning partners and to address the AHMP revision for Twin Falls County.
- 3-26 Office work, meeting with Saige Ballock Dixon on revision of county AHMP, and snow pack tour with Rock Creek Fire Department.
- 4-23 Projects recorded for 2025 AHMP Revision done with cities; Buhl Public Works Director, Jason Scott, Craig Eckles, City Manager for the City of Kimberly, City Councilwoman Lynn Ginder for the City of Hollister, and Dee Hunsaker, Mayor for the City of Murtaugh.
- 4-25 Meeting with Parks/Weeds Supervisor. Kali Sherell to address county projects for AHMP Revision.
- 5-7 CWPP Projects reviewed and updated with Buhl Fire Department Chief, Andrew Stevens.
- 7-1 Owyhee County AHMP meeting with those planning partners to address state line hazards between the counties.
- 7-7 City of Twin Falls Comprehensive Plan Survey done by County EM Jackie Frey.
- 7-8 Office work, LEPC meeting and ICS 300 Course in Jerome.
- 7-29 EM meeting with Saige Ballock Dixon to address TFCO AHMP Projects.
- 9-25 Open Forum with LEPC partners/city officials to address projects in the TFCO AHMP.

TFCO All Hazard Mitigation Plan Open Forum Sign In Sheet - September 25th, 2025

Name	Agency	Address	Phone	E-mail
Jackie F. Jones	TFCO OEM			
Keith Thompson	College of Southern Idaho			
Justin Henderson	TFFID			Kevin.Arthur@partmed.ca
Kevin Arthur	CIHCC			
Kon Aguirre	REFD			
Tyler Swift	USDA APHIS			tyler.swift@usda.gov
Paul Hamlett	AKES RACES			
Stan Flint	MVP			
Lori Harrison	USDA-			
Nick Denny	Lineage			
GABRIEL HANCOCK	TFFD			
Brent Reimetz	TFFC			
Andrew Stevens	Buhl Fire Dist			andrew@buhlfire.com
Brock McMurty	IGL			
Kelly Hemgesell	North Canyon Medical			Kelly.hemgesell@northcanyon.org
SHANE SMITH	TFFID			SSMITH@TFFID.ORG
SPENCER CUTLER	COTF / CSI			scutler@tfid.org
Brenda Mason	SEPHD			
Spencer Cutler	OSF TFCity			

Saige J. Ballock-Dixon, P.E., PMP

From: Jackie Frey <jfrey@tfco.org>
Sent: Monday, February 3, 2025 11:06 AM
To: Saige J. Ballock-Dixon, P.E., PMP
Subject: February 11th, 2025 - TFCO LEPC Meeting

Good Morning:

Please mark your calendars and attend the next Twin Falls County Local Emergency Planning Committee (LEPC) meeting on **February 11th, 2025 at 1:30** in Conference Room B at County West.

Our guest presenter will be Saige Ballock Dixon, LBYD Federal to address the revision of the Twin Falls County All Hazard Mitigation Plan.

Directions:

The meeting is held in County West, 630 Addison Avenue West; the entrance is located off of Martin Street; go to the northeast entrance of the facility (large parking area); go through the revolving door and straight past the information desk, turn right; Conference Room B is marked and directly on your left.

In closing, have a wonderful weekend and I hope you can attend!

Sincerely,

Jackie Frey, Coordinator

Twin Falls County Office of Emergency Management
P.O. Box 126
630 Addison Ave. West
Twin Falls, Idaho 83303
208-736-4234 work
208-731-6835 cell
jfrey@tfco.org

**TWIN FALLS COUNTY LOCAL EMERGENCY
PLANNING COMMITTEE (LEPC)
MEETING MINUTES
February 11th, 2025**

Attendance:

Rick Young, MVBDR
Brent Reinke, TFCO Commissioner
Jealsy Knutz, SCPHD
Amy Dillon, SCPHD
Emily Petersen, LINC
Dave Ayers, IOEM
Paul Hamlett, ARES/RACES
Keith Thompson, CSI
Ron Aguirre, RCFD
David Thompson, OOA
Brian Maughan, St. Luke's
Randy Hall, St. Luke's
Marilyn Shiroma, OOA
Kristy Churchman, SIRCOMM
Sue Switzer, DEQ
Jackie Frey, TFCO OEM

Mike Todd, Citizen
Alison Walker, City of Twin Falls
Maria Contreras, Center for Community Health
Paul Andersen, ARES/RACES
Brent Reinke, TFCO Commissioner
Ruth Ann Harker, United Way
Mitch Brooks, TF City Fire
Stan Flint, Magic Valley Paramedics
Steve Mullen, Filer Fire Dept.
Sjuni Bunderson, Kimberly City Police
Brian Andreasen, Williams Pipeline
Joe Adams, Williams Pipeline
Saige Ballock-Dixon, LBYD Federal
John Darnell, Filer City Police
Spencer Cutler, CSI/TF City Council

Presenter:

Saige Ballock-Dixon, Environmental Engineer for LBYD Federal was in attendance to begin the update to the Twin Falls County All Hazard Mitigation. Saige asked the attendees to review the hazards on her list and check the 5 top hazards in TFCO. She then addressed the following:

- Process for the update to the AHMP
- What is the AHMP?
- FEMA's Requirements
- Check Lists
- CWPP Annex
- Partners supporting the revision of the TFCO AHMP
- Hazard Specific Projects
- Historical Data of Events
- FEMA/State Requirement for the AHMP to be updated every 5 Years (*Last plan done in 2020 FEMA approved*)
- Making TFCO more resilient
- Damage Assessment during an event
- Importance of Community Input; LEPC partners, citizens, elected officials
- Future Meetings
- Survey

- FYI: The All Hazard Mitigation Plan addresses natural hazards that threaten the cities and communities. The hazards considered include flooding, severe weather, landslides, earthquakes, avalanches, drought, natural rodent damage to crops/canal banks (crawfish), and wildland fire. The AHMP looks at hazard risk and vulnerability, identifies mitigation strategies, and established grant funding eligibility for disaster assistance and hazard mitigation costs.
- The Community Wildfire Protection Plan CWPP is an addendum or annex to the plan. The CWPP defines the wildland urban interface, analyzes wildfire threat, and identifies wildfire mitigation projects. Communities with CWPP are also given priority for federally funding.

Please contact me if you have any questions on this process. Also, I will continue to send out information on meetings and the survey as Saige continues to address the update. JF

No Agency Reports:

Upcoming Events/Classes/Informative Sites

A number of training classes are currently being offered. To review the course calendar and to register go to: <https://www.idahoprepares.com/>

Please note: FEMA also has a number of free Independent Study courses that can be taken online at: www.fema.gov/training

For more information on emergency preparedness go to:

1. www.ready.gov
2. www.fema.gov
3. www.weather.gov/safety
4. <https://community.fema.gov>
5. www.twinfallscounty.org (under departments click on Emergency Management)

Next Meeting:

The next Twin Falls County LEPC meeting will be held on **March 11th, 2025 at 1:30** in Conference Room B at County West. Our guest presenter(s) will be Franklin Delos Reyes and staff from Marathon Pipeline.

Directions: The meeting is held in County West, 630 Addison Avenue West; the entrance is located off of Martin Street; go to the northeast entrance of the facility (large parking area); go through the revolving door and straight past the information desk, turn right; Conference Room B is marked and directly on your left.

**TWIN FALLS COUNTY
OFFICE OF EMERGENCY MANAGEMENT**

630 Addison Avenue West
TWIN FALLS, ID. 83303-0126

(208) 736-4234

(208) -731-6835 cell

jfrey@tfco.org

Idaho Relay (TTY) 1-800-377-3529

Twin Falls County is an Equal Opportunity Employer

February 12, 2025

Dear Fire Planning Group:

The Twin Falls County Office of Emergency Management would like to invite you to a meeting to update the Community Wildfire Protection Plan (CWPP) on March 19th, 2025 at 10:00 a.m.

This 1.5-hour meeting will be facilitated by Tyre Holfeltz, Wildfire Risk Mitigation Program Manager for the Idaho Department of Lands. The meeting will be held in Conference Room B at County West 630 Addison Avenue in Twin Falls, Idaho.

The CWPP is one of the most important components of wildfire safety strategy in Twin Falls County. The CWPP defines the wildland urban interface, analyzes wildfire threat, and identifies wildfire mitigation projects. Communities with CWPP's are also given priority for federally funded hazardous fuels reduction projects.

For the CWPP projects you will need to come with projects in mind for inclusion, be specific, not general in nature, to include the project name, have a basic/brief narrative (1-2 sentences), have a time of implementation (now - 1 year, later/soon - 3 years, or considering/hoping - 5 years), who will be involved, and for our non-federal partners an estimated cost.

NOTE: The Community Wildfire Protection Plan (CWPP) is an addendum/annex in the Twin Falls County All Hazard Plan which is being updated in 2025.

In closing, it is imperative that you or a representative attend this meeting. For more information or questions about the process or clarification on any of the above. Please contact Tyre Holfeltz at 208-819-9340 or tholfeltz@idl.idaho.com

Sincerely,

Jackie Frey, Coordinator

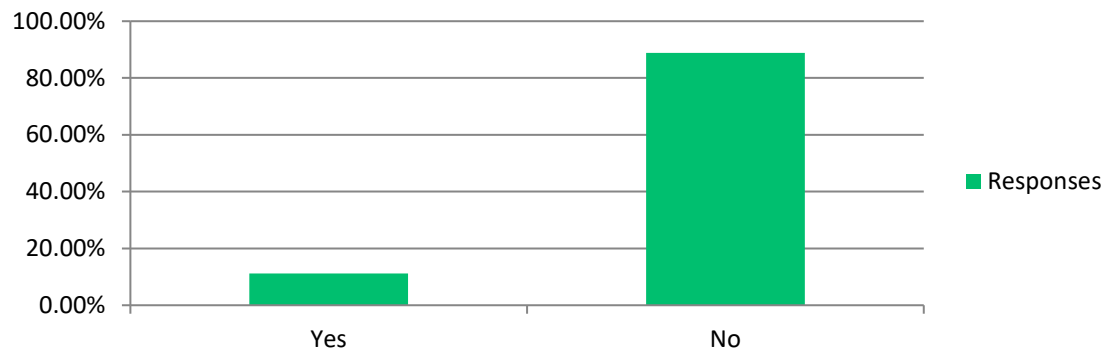
Attachment 2. Community Survey

2025 Twin Falls HMP Survey

In the past five years, in Twin Falls County, have you or someone in your household directly experienced a natural disaster? (such as an earthquake, severe storm, flood, wildfire, drought, etc)

Answer Choices	Responses	
Yes	11.21%	13
No	88.79%	103
Answered		116
Skipped		0

In the past five years, in Twin Falls County, have you or someone in your household directly experienced a natural disaster? (such as an earthquake, severe storm, flood, wildfire, drought, etc)

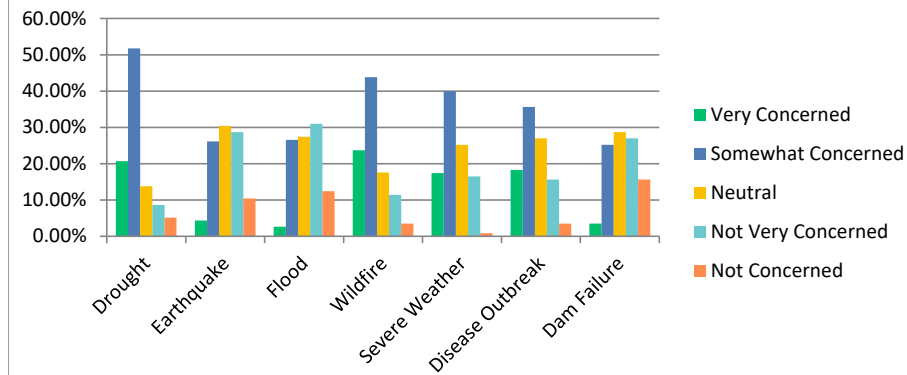


2025 Twin Falls HMP Survey

How concerned are you with the following natural disasters impacting Twin Falls County?

	Very Concerned		Somewhat Concerned		Neutral		Not Very Concerned		Not Concerned		Total
Drought	20.69%	24	51.72%	60	13.79%	16	8.62%	10	5.17%	6	116
Earthquake	4.35%	5	26.09%	30	30.43%	35	28.70%	33	10.43%	12	115
Flood	2.65%	3	26.55%	30	27.43%	31	30.97%	35	12.39%	14	113
Wildfire	23.68%	27	43.86%	50	17.54%	20	11.40%	13	3.51%	4	114
Severe Weather	17.39%	20	40.00%	46	25.22%	29	16.52%	19	0.87%	1	115
Disease Outbreak	18.26%	21	35.65%	41	26.96%	31	15.65%	18	3.48%	4	115
Dam Failure	3.48%	4	25.22%	29	28.70%	33	26.96%	31	15.65%	18	115
Answered										116	
Skipped										0	

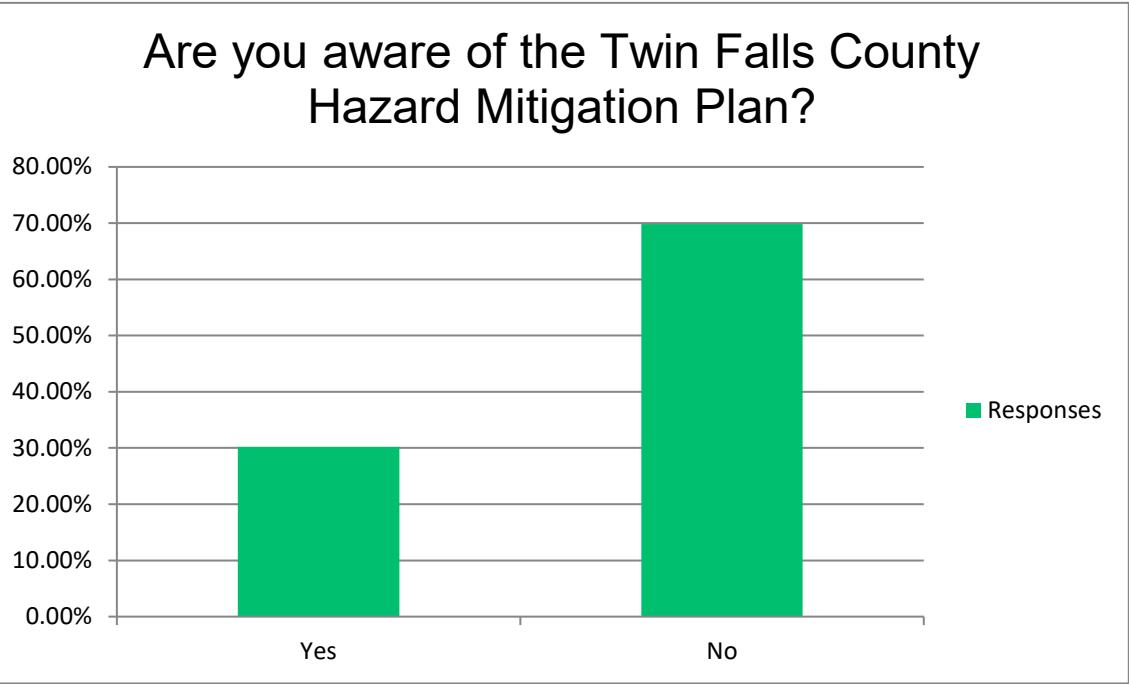
How concerned are you with the following natural disasters impacting Twin Falls County?



2025 Twin Falls HMP Survey

Are you aware of the Twin Falls County Hazard Mitigation Plan?

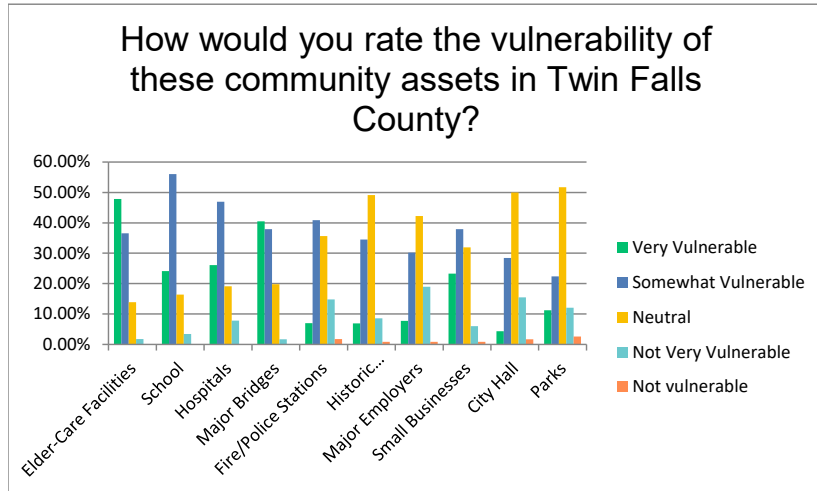
Answer Choices	Responses	
Yes	30.17%	35
No	69.83%	81
Answered		116
Skipped		0



2025 Twin Falls HMP Survey

How would you rate the vulnerability of these community assets in Twin Falls County?

	Very Vulnerable		Somewhat Vulnerable		Neutral		Not Very Vulnerable		Not vulnerable		Total
Elder-Care Facilities	47.83%	55	36.52%	42	13.91%	16	1.74%	2	0.00%	0	115
School	24.14%	28	56.03%	65	16.38%	19	3.45%	4	0.00%	0	116
Hospitals	26.09%	30	46.96%	54	19.13%	22	7.83%	9	0.00%	0	115
Major Bridges	40.52%	47	37.93%	44	19.83%	23	1.72%	2	0.00%	0	116
Fire/Police Stations	6.96%	8	40.87%	47	35.65%	41	14.78%	17	1.74%	2	115
Historic Museums/historic buildings	6.90%	8	34.48%	40	49.14%	57	8.62%	10	0.86%	1	116
Major Employers	7.76%	9	30.17%	35	42.24%	49	18.97%	22	0.86%	1	116
Small Businesses	23.28%	27	37.93%	44	31.90%	37	6.03%	7	0.86%	1	116
City Hall	4.31%	5	28.45%	33	50.00%	58	15.52%	18	1.72%	2	116
Parks	11.21%	13	22.41%	26	51.72%	60	12.07%	14	2.59%	3	116
										Answered	116
										Skipped	0



2025 Twin Falls HMP Survey

Natural disasters can have a significant impact on a community and its resources. Planning for these disasters and implementing mitigation measures can minimize damages. Please tell us how important each statement about hazard mitigation is to you.

	Very Important		Somewhat Important		Neutral		Not Very Important		Not Important		Total
Protecting private property	51.72%	60	31.03%	36	13.79%	16	3.45%	4	0.00%	0	116
Protecting critical infrastructure (utilities, emergency services, transpoc	85.34%	99	9.48%	11	4.31%	5	0.86%	1	0.00%	0	116
Preventing development in hazard areas	50.43%	58	32.17%	37	15.65%	18	1.74%	2	0.00%	0	115
Enhancing the function of natural features (streams, wetlands during	43.97%	51	32.76%	38	21.55%	25	1.72%	2	0.00%	0	116
Protecting historical and cultural landmarks	29.31%	34	38.79%	45	25.00%	29	6.90%	8	0.00%	0	116
Protecting and reducing damage to utilities	71.55%	83	21.55%	25	6.03%	7	0.86%	1	0.00%	0	116
Strengthening emergency services	73.28%	85	20.69%	24	6.03%	7	0.00%	0	0.00%	0	116
Disclosing natural hazard risks during real estate transactions	55.17%	64	31.90%	37	12.93%	15	0.00%	0	0.00%	0	116
Promoting cooperation among public agencies, citizens, non-profits o	68.97%	80	21.55%	25	8.62%	10	0.86%	1	0.00%	0	116
Answered										116	
Skipped										0	

