# Annex A Beaverhead County

## A.1 Mitigation Planning and County Planning Team

This County Annex builds on previous versions of the Beaverhead County Hazard Mitigation Plan completed in 2017 and reflects current hazard and mitigation priorities. As part of the regional planning process, the County established a County Planning Team (CPT) to develop the mitigation plan and identify potential mitigation projects. The following incorporated communities participated in the DMA planning process with the County:

- City of Dillon
- Town of Lima

More details on the planning process followed and how the counties, municipalities and stakeholders participated can be referenced in Chapter 3 of the base plan. A full list of local government departments and stakeholders that participated can be found in Appendix A.

## A.2 Community Profile

### A.2.1 Geography and Climate

Beaverhead County is located in southwest Montana, with an area of approximately 5,542 square miles, the largest in the state. Beaverhead County is bounded by Ravalli, Deer Lodge, and Silver Bow Counties on the north, Madison County on the east, and the State of Idaho on the south and west. The City of Dillon is the county seat, and the Town of Lima is the only other incorporated community in Beaverhead County.

Three major rivers flow through the county. Each river runs through a very large mountainous valley. Elevations in Beaverhead County range from 4,770 feet above mean sea level along the Big Hole River near the northeast border of the county to over 10,300 feet at Monument Peak along the Idaho border in the Beaverhead Mountains to 11,147 feet at Torrey Mountain and 11,157 feet at Tweety Mountain in the East Pioneer Mountains, northwest of Dillon. The landscape is very diverse in its makeup. Beaverhead County consists of upland glaciated plains that range from nearly level to steeply sloping and numerous steep rugged mountain ranges. These ranges are made up of large grass and sagebrush parks, high alpine meadows, and heavily timbered slopes. Soil consistencies range from rich topsoil to clay and sand.

Beaverhead County is located within the region generally classified as dry continental or Steppe with four distinct seasons. The weather in Beaverhead County is as diverse as the topography of the county with often large daily temperature variations, particularly from the fall to the spring. Days with severe winter cold and extreme summer heat are typical. Weather conditions can change rapidly and drastically because of the extreme elevation changes throughout the county. Valley temperatures average fairly consistently across the county. Average high temperatures in January range from 34.4°F in Dillon to 22.4°F in Lakeview. The average lows are from 12.5°F in Dillon to –0.2°F in Lakeview. Temperatures often drop well below 0°F and can last for several days. In winter, temperatures often vary significantly from the averages. Temperatures below -50°F have been recorded, while typical extreme winter minimum temperatures are between -25°F and -35°F. Extreme wind chill situations occur every winter when windy conditions coincide with very low temperatures.

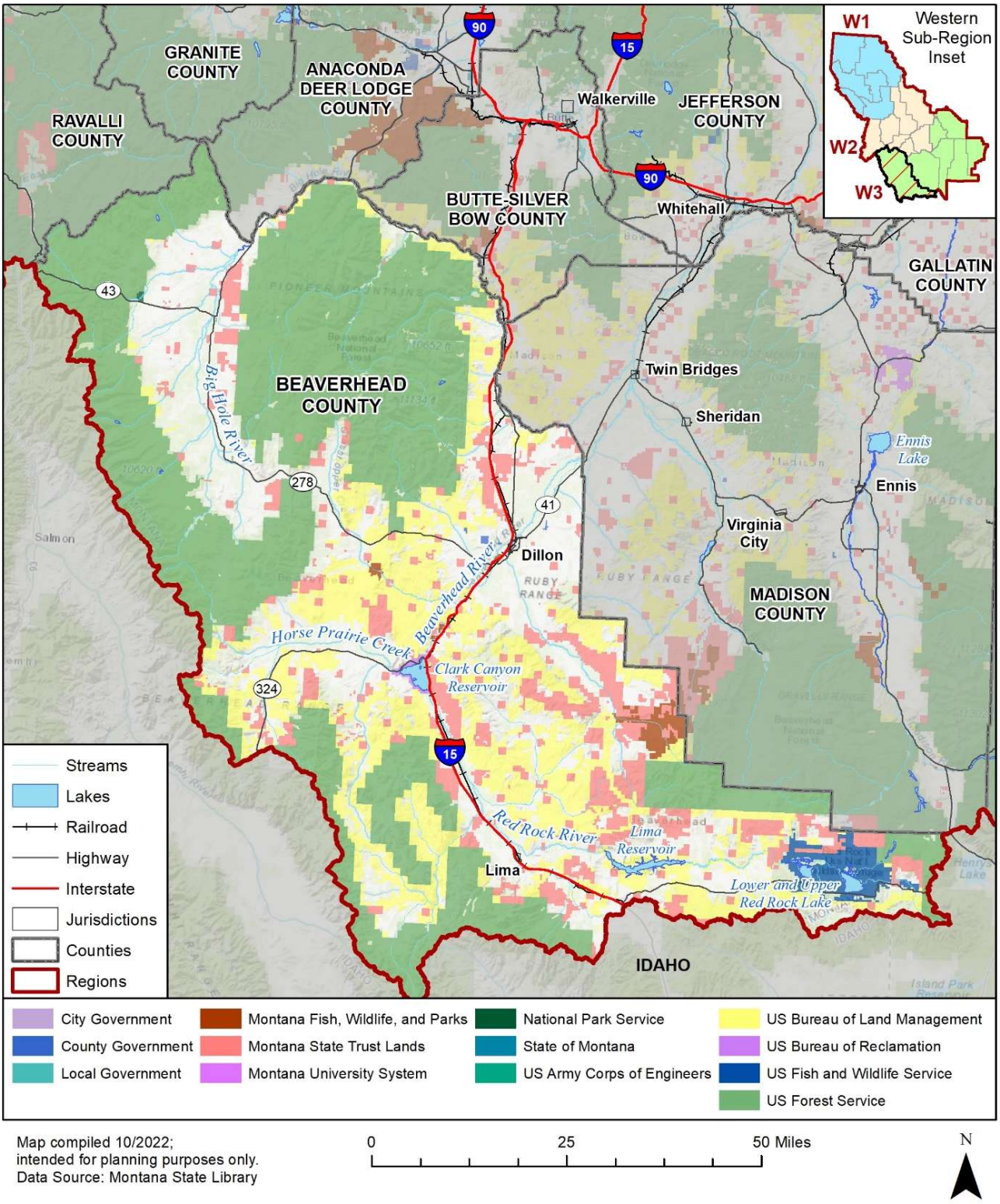
Average high temperatures in July range from 83.3°F in Dillon to 76.7°F in Lakeview. The low averages are from 47.6°F in Dillon to 38.2°F in Wisdom. Averages are fairly uniform across the county at valley location, but again, can change and be quite different at higher elevations. Brief spells with temperatures above 100°F can occur but are often short lived. Temperatures above 101°F have been reported on occasion. extended

periods with temperatures above 90°F occur every few years. Freezing temperatures can occur, but are rare in June, July, and August, particularly at sheltered valley locations.

Annual average precipitation ranges from 13.11 inches in Dillon to 19.76 inches in Lakeview. In Dillon, 61 percent of the precipitation falls from May through September. In other reporting areas of the county, the precipitation is fairly evenly distributed throughout the year. Average winter snowfall ranges from 38.4 inches at Dillon to 100+ inches at higher mountainous elevations. The heaviest snowstorms often occur from mid-October through December and late March through May. These storms can produce more than 12 inches of snow and often these storms are accompanied by high winds resulting in blizzard conditions.

Figure A-1 Beaverhead County Base Map and Land Stewardship below is a base map produced for the County.

**Figure A-1 Beaverhead County Base Map and Land Stewardship**



## A.2.2 Population Trends

According to the 2020 U.S. Census, Beaverhead County is the 22nd most populous county in Montana with a total population of 9,371. The U.S. Census Bureau reported the County experienced a 6.1% decrease in population since the 2010 census, with the greatest concentration of people residing in the City of Dillon. Trends show that the population in rural towns is decreasing. Specific demographic variables for the County are provided in Table A-1 below.

**Table A-1 Population Trends in Beaverhead County 1980-2020**

| Incorporated Community | 1980 | 1990 | 1980-1990 Change | 2000 | 1990-2000 Change | 2010 | 2000-2010 Change | 2020 | 2010-2020 Change |
|---|---|---|---|---|---|---|---|---|---|
| City of Dillon | 3,976 | 3,991 | 0.4% | 3,752 | -6.0% | 4,134 | 10.2% | 3,880 | -6.1% |
| Town of Lima | 272 | 265 | -2.6% | 242 | -8.7% | 221 | -8.7% | 212 | -4.1% |
| Beaverhead County | 8,186 | 8,424 | 2.9% | 9,202 | 9.2% | 9.246 | 0.5% | 9,371 | 1.4% |

Source: US Census 2010-2020, U.S. Decennial Census 1980-2000

## A.2.3 Demographics

The 2016-2020 American Community Survey (ACS) reports demographic estimates for Beaverhead County, summarized in the table below Table A-2.

**Table A-2 Demographic Estimates for Beaverhead County (2016-2020 ACS)**

| Characteristic | Beaverhead County | State of Montana |
|---|---|---|
| Percentage of persons below 150% poverty estimate | 27.3% | 24.1% |
| Unemployment Rate estimate | 3.3% | 4.0% |
| Percentage of housing cost-burdened occupied housing units with annual income less than $75,000 (30%+ of income spent on housing costs) estimate | 25.8% | 21.4% |
| Percentage of persons with no high school diploma (age 25+) estimate | 5.3% | 7.5% |
| Percentage uninsured in the total civilian noninstitutionalized population estimate | 5.9% | 9.6% |
| Percentage of persons aged 65 and older estimate | 22.3% | 22.1% |
| Percentage of persons aged 17 and younger estimate | 17.2% | 21.3% |
| Percentage of civilian noninstitutionalized population with a disability estimate | 17.5% | 15.6% |
| Percentage of single-parent households with children under 18 estimate | 5.4% | 3.9% |
| Percentage of persons (age 5+) who speak English "less than well" estimate | 0.1% | 0.3% |

| Characteristic | Beaverhead County | State of Montana |
|---|---|---|
| Minority (other than white non-Hispanic) estimate | 9.9% | 14.6% |
| Percentage of housing in structures with 10 or more units estimate | 2.1% | 3.3% |
| Percentage of mobile homes estimate | 16.9% | 13.1% |
| Percentage of occupied housing units with more people than rooms estimate | 1.1% | 2.1% |
| Percentage of households with no vehicle available estimate | 2.1% | 4.9% |
| Percentage of persons in group quarters estimate | 5.9% | 2.8% |
| Percentage Female estimate | 50.0% | 49.7% |
| Median Age estimate | 42.6 | 40.1 |
| Median Gross Rent estimate | $703 | $836 |
| Median House Value estimate | $206,900 | $244,900 |
| Percent Unoccupied Housing Units estimate | 21.6% | 15.3% |

Source: ACS 2016-2020

## A.2.4 Social Vulnerability

Social vulnerability is broadly defined as the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. Social vulnerability considers the social, economic, demographic, and housing characteristics of a community that influence its ability to prepare for, respond to, cope with, recover from, and adapt to environmental hazards. Additional details on social vulnerability and the NRI can be found in Section 4.1.1.5 of the Base Plan.

The SoVI-based social vulnerability score for Beaverhead County is lower (less vulnerable) than 70% of Montana counties, is near-average for Western Region counties, and rated as "relatively moderate" by the NRI. Refer to the HIRA for more information on social vulnerability. Demographic factors that can influence the social vulnerability rating are displayed in Table A-2. The ACS reports that a significant portion of the population in Beaverhead County (more than a quarter) is below the 150% poverty level. Additionally, 25.8% of the population in Beaverhead County experiences the housing cost-burden, which is higher than the State of Montana average. 17.2% of the population is aged 17 and younger, indicating that many individuals are still dependent on a caretaker, and 5.4% of families are single-parent households with children under 18, which is nearly 1.5% higher than the Montana average. Finally, 2.1% of houses are structures with 10 or more units, which is 1.1% lower than the State of Montana average.

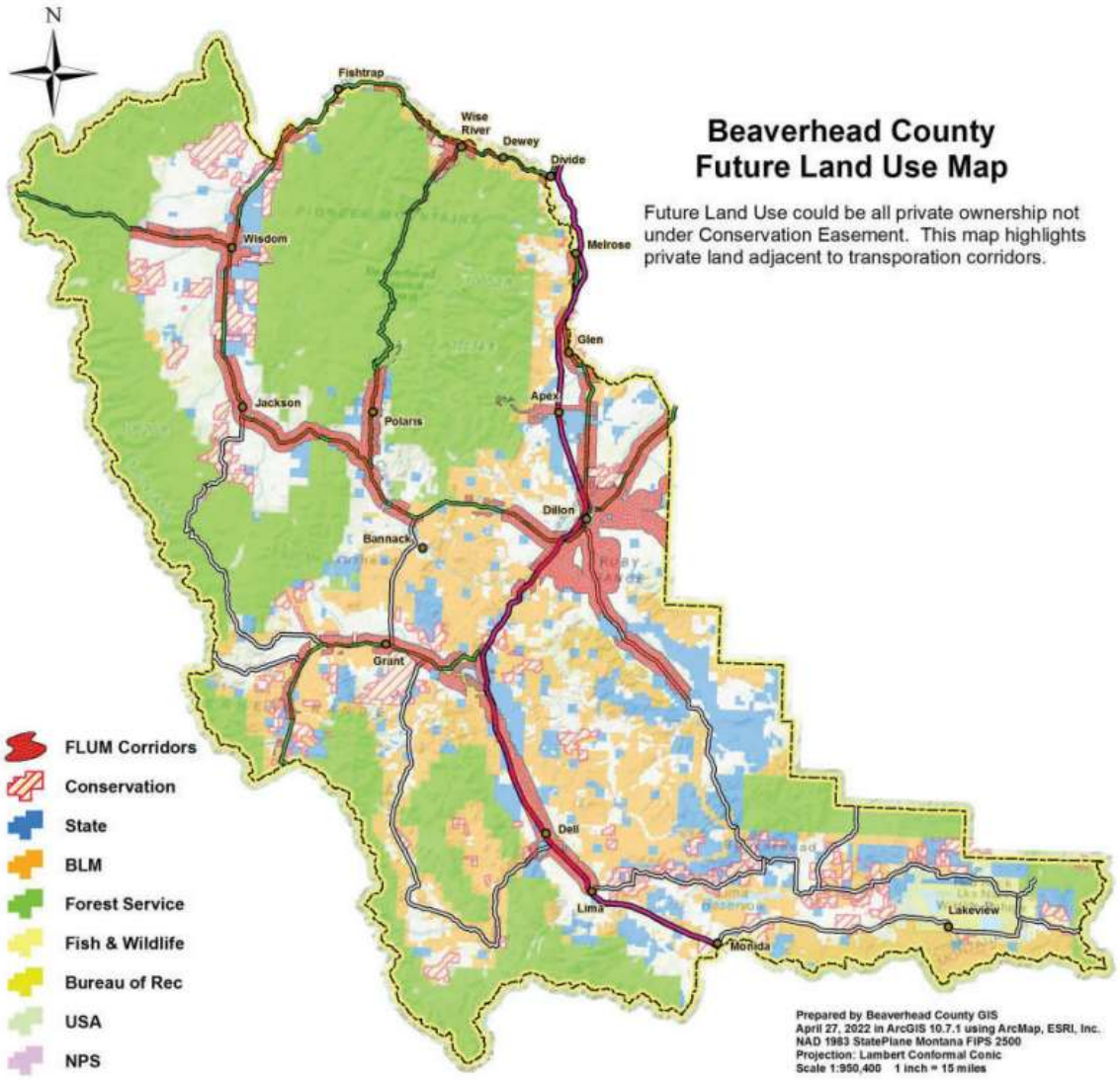
With regard to hazards, socially vulnerable populations may be disproportionately impacted by hazards that include flooding, wildfires, dam failure, earthquakes and wildfires. Severe weather hazards may result in power outages that could have a greater impact on these populations, including those dependent on electricity for medical reasons. The CPT noted vulnerability concerns about the County's large population of older adults. The CPT mentions that these populations are recognized in the Emergency Operations Plans, but not much research has been completed to truly recognize these vulnerable populations.

## A.2.5 Development Trends

According to the CPT, most of the development in Beaverhead County is being done in the rural areas of Beaverhead County, but also includes development within the incorporated Cities and small communities.

There have been a few commercial structures built at the Dillon Airport. The growth mainly consists of single-family residences in rural areas. Moreover, with regards to future development areas in the 100-year or 500-year floodplains, the CPT mentioned that the rural areas of Beaverhead County are being developed because of the attraction of rural lifestyles, recreation and aesthetic qualities. With this being a reason for people to relocate to this area, it is expected that further development will be proposed in floodplains and hazard prone areas. In addition, as mentioned in the Beaverhead County 2022 Growth Policy, it is the goal of residents to preserve as much as possible the character of the County while managing growth. The County may need to take a close look at considering adopting zoning regulations to assist in reducing residential sprawl and to encourage higher density subdivisions that have smaller lots, shared water, and sewer resources and are easier to provide services to. Many residents also think that the County should consider adopting a formal building or development permit to assist property owners, developers and builders by reducing the problems caused by unmanaged building and development. The County Planning Board also would like to guide residential development toward existing communities and along major transportation corridors. Board has developed a future land use map (FLUM) that is meant to encourage this type of development. The map is shown below.

**Figure A-2 Beaverhead County Future Land Use Map**

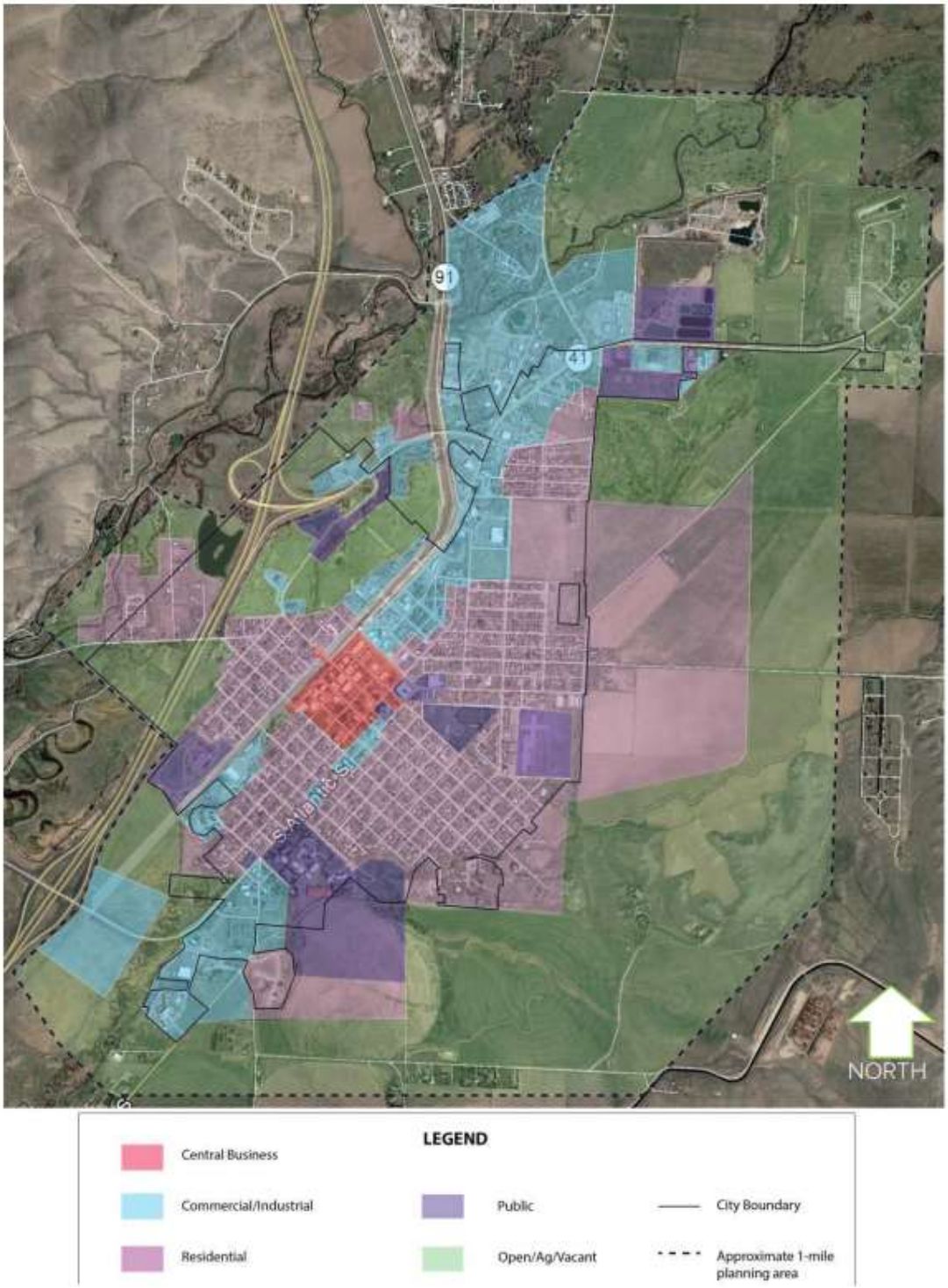



Source: Beaverhead County 2022 Growth Policy

**City of Dillon:** The City of Dillon has seen an increase in the construction of single-family residences and multi-family structures, as well as few commercial constructions. The City of Dillon is also expecting to see continued development growth in the 100-year or 500-year floodplains. In addition, as mentioned in the City of Dillon 2016 Community Plan, the City promotes and encourages planned growth with respect to infrastructure capacity and overall quality of life. The city also aims to preserve and promote land uses which are compatible with and respectful of Dillon's sense of place, its rural small town setting and overall quality of life. Figure A-3 below is the future land use map for the City of Dillon, which is included in the 2016 Community Plan.

**Town of Lima:** The Town of Lima also has seen an increase in the construction of single-family residences. The Town of Dillon is also expecting to see continued development growth in the 100-year or 500-year floodplains.

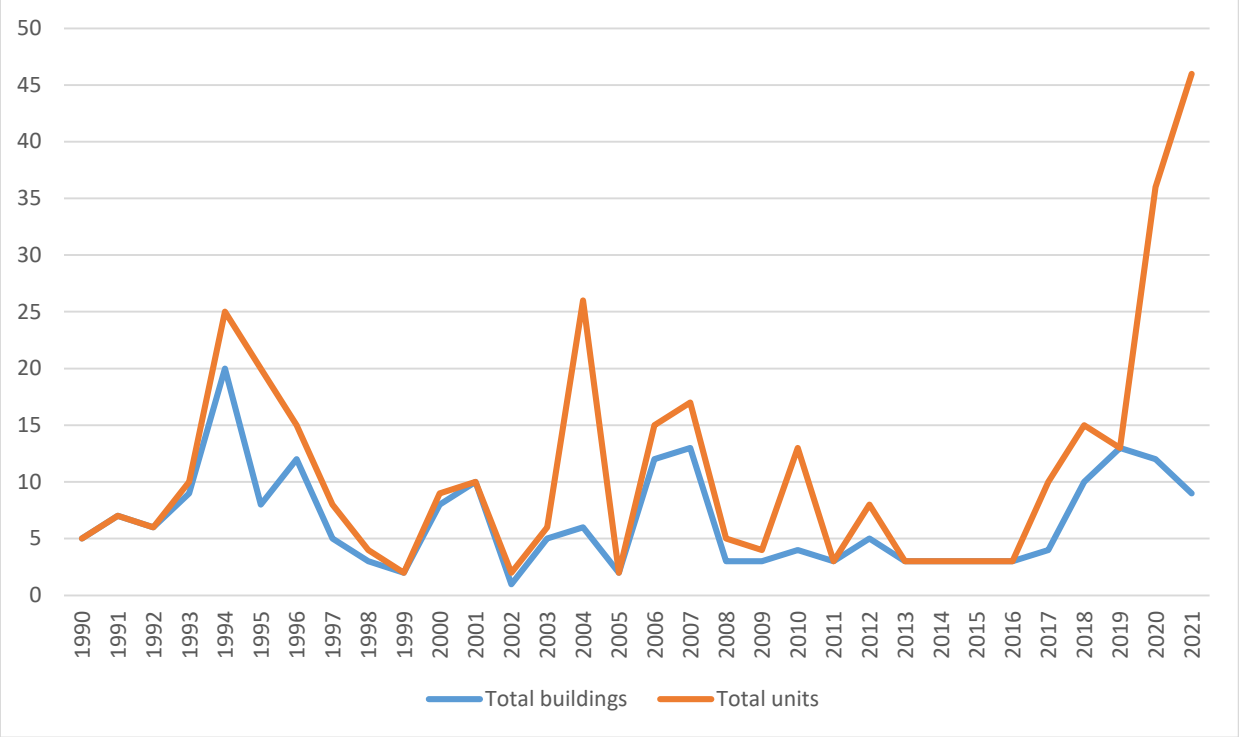
**Figure A-3 City of Dillon Future Land Use Map**




Source: City of Dillon 2016 Community Plan

The U.S. Census Bureau Building Permit Survey provides information and local statistics on new privately-owned residential construction. Figure A-4 below displays the new privately owned housing unit authorizations by year in Beaverhead County. This data indicates that the number of new privately owned housing unit has been fluctuating throughout the last three decades. There was a significant increase in unit authorizations in 2019, and the increase is still continuing. An increase in the number of housing unit authorizations in the county could indicate an increase in the total number of buildings exposed to hazard events. However, it is unknown how this development will impact vulnerability to specific hazards, such as wildfire and flooding.

**Figure A-4 New Privately Owned Housing Unit Authorizations**




Source: US Census Bureau, https://www.census.gov/construction/bps/data_visualizations/index.html

## A.2.6 Economy

Table A-3 below provides a brief overview of economic characters in Beaverhead County. The following information is provided by the U.S. Census Bureau American Community Survey (ACS) 5-year estimates from 2016-2020.

**Table A-3 Beaverhead County Economic Profile**

| Economic Characteristics | Beaverhead County |
|---|---|
| Families Below Poverty Level | 7.4% |
| Individuals Below Poverty Level | 16.1% |
| Median Home Value | $249,000 |
| Median Household Income | $45,819 |

| Economic Characteristics | Beaverhead County |
|---|---|
| Per Capita Income | $28,798 |
| Population > 16 Years Old in Labor Force | 57.9% |
| Population Employed | 56.0% |

Source: U.S. Census Bureau ACS 5-year estimates, 2021

Table A-4 below shows the breakdown of employment in Beaverhead County by the industry sector. According to the ACS, the leading employment sectors in the County are "Educational services, and health care and social assistance," which composes nearly a quarter of the total employment in the County with 958 people. This is followed by "Agriculture, forestry, fishing and hunting, and mining" with 716 people. A close third is the "Arts, entertainment, and recreation, and accommodation and food services" Industry with 705 of the population in Beaverhead County employed.

**Table A-4 Beaverhead County Occupation by Industry Profile**

| Industry | Population Employed | Percent of Labor Force |
|---|---|---|
| Agriculture, forestry, fishing and hunting, and mining | 716 | 15.8% |
| Construction | 391 | 8.6% |
| Manufacturing | 250 | 5.5% |
| Wholesale trade | 85 | 1.9% |
| Retail trade | 558 | 12.3% |
| Transportation and warehousing, and utilities | 134 | 3.0% |
| Information | 114 | 2.5% |
| Finance and insurance, and real estate and rental and leasing | 280 | 6.2% |
| Professional, scientific, and management, and administrative and waste management services | 101 | 2.2% |
| Educational services, and health care and social assistance | 958 | 21.1% |
| Arts, entertainment, and recreation, and accommodation and food services | 705 | 15.5% |
| Other services, except public administration | 67 | 1.5% |
| Public administration | 177 | 3.9% |

Source: U.S. Census Bureau ACS 5-year estimates, 2016-2020

# A.3 Hazard Identification and Risk Assessment

## A.3.1 Identified Hazards

The CPT reviewed significant hazards for inclusion in the hazard mitigation plan. Several changes were made from the 2017 Beaverhead County Hazard Mitigation Plan to be consistent with the 2023 Montana Western Regional Hazard Mitigation Plan. In this plan update, Avalanche, Cyber-Attack, Dam Failure, Landslide, and Human Conflict were added. On the other hand, the following hazards that were discussed in the 2017 plan were not included: Aircraft Accidents, Terrorism and Civil Unrest, Urban Fire, Utility and Energy Failure. Additionally, Disease and Environmental Contamination hazard in the 2017 plan is now profiled as Communicable Disease.

Table A-5 provides a summary of the overall hazard significance for the hazards evaluated in this plan, showing variability by jurisdiction. More details on hazards can be found in Chapter 4 of the base plan.

**Table A-5 Beaverhead County Overall Hazard Significance by Hazard and Jurisdiction***

| Hazard | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| Avalanche | Low | Low | Low |
| Communicable Disease | Medium | Medium | Medium |
| Cyber-Attack | Medium | Medium | Medium |
| Dam Failure | Medium | Medium | Medium |
| Drought | High | High | High |
| Earthquake | Low | Low | Low |
| Flooding | Medium | Medium | Medium |
| Hazardous Materials Incident | Low | Low | Low |
| Landslide | Low | Low | Low |
| Severe Summer Weather | Medium | Medium | Medium |
| Severe Winter Weather | Medium | Medium | Medium |
| Human Conflict | Medium | Medium | Medium |
| Tornadoes & Windstorms | Medium | Medium | Medium |
| Transportation Accidents | Low | Low | Low |
| Volcanic Ash | Low | Low | Low |
| Wildfire | Medium | Medium | Medium |

*Significance based on a combination of Geographic Extent, Potential Magnitude/Severity and Probability as defined below.

**Geographic Extent**

Negligible: Less than 10 percent of planning area or isolated single-point occurrences

Limited: 10 to 25 percent of the planning area or limited single-point occurrences

Significant: 25 to 75 percent of planning area or frequent single-point occurrences

Extensive: 75 to 100 percent of planning area or consistent single-point occurrences

**Potential Magnitude/Severity**

Negligible: Less than 10 percent of property is severely damaged, facilities and services are unavailable for less than 24 hours, injuries and illnesses are treatable with first aid or within the response capability of the jurisdiction.

Limited: 10 to 25 percent of property is severely damaged, facilities and services are unavailable between 1 and 7 days, injuries and illnesses require sophisticated medical support that does not strain

**Probability of Future Occurrences**

Unlikely: Less than 1 percent probability of occurrence in the next year or has a recurrence interval of greater than every 100 years.

Occasional: Between a 1 and 10 percent probability of occurrence in the next year or has a recurrence interval of 11 to 100 years.

Likely: Between 10 and 90 percent probability of occurrence in the next year, or has a recurrence interval of 1 to 10 years

Highly Likely: Between 90 and 100 percent probability of occurrence in the next year or has a recurrence interval of less than 1 year.

**Overall Significance**

Low: Two or more of the criteria fall in the lower classifications or the event has a minimal impact on the planning area. This rating is also sometimes used for hazards

| | |
|---|---|
| the response capability of the jurisdiction, or results in very few permanent disabilities.<br><br>Critical: 25 to 50 percent of property is severely damaged, facilities and services are unavailable or severely hindered for 1 to 2 weeks, injuries and illnesses overwhelm medical support for a brief period of time or result in many permanent disabilities and a few deaths. overwhelmed for an extended period of time or many deaths occur.<br><br>Catastrophic: More than 50 percent of property is severely damaged, facilities and services are unavailable or hindered for more than 2 weeks, the medical response system is overwhelmed for an extended period of time, or many deaths occur. | with a minimal or unknown record of occurrences/impacts or for hazards with minimal mitigation potential.<br><br>Medium: The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is also sometimes utilized for hazards with a high impact rating but an extremely low occurrence rating.<br><br>High: The criteria consistently fall along the high ranges of the classification and the event exerts significant and frequent impacts on the planning area. This rating is also sometimes utilized for hazards with a high psychological impact or for hazards that the jurisdiction identifies as particularly relevant. |

## A.3.2 Building Inventory and Assets

People, property, critical facilities/infrastructure, and other important assets in Beaverhead County are exposed to the hazards identified in this plan. Table A-6 summarizes the property inventory for the County and each participating jurisdiction, based on improvement value (i.e., structures) and includes the building count and value grouped by parcel type and jurisdiction. This is an assessment of the overall property exposed within the County and by jurisdiction.

Assets inventoried to determine hazard exposure and potential vulnerability include people, structures, critical facilities, and natural, historic, or cultural resources. For the regional planning process, locally available GIS databases were utilized. Parcel and assessor data was obtained through Montana's MSDI Cadastral website. This Statewide database provided the basis for building exposure and property types. The focus of the analysis was on "improved" or developed parcels. These parcels were identified based on an improvement value greater than zero. Property Types were used to identify occupancy types as shown in the following table, which includes summations of total improved value for the various property types.

**Table A-6 Beaverhead County Building Inventory and Value by Jurisdiction**

| Jurisdiction | Improved Parcels | Improved Value | Content Value | Total Value |
|---|---|---|---|---|
| Dillon | 1,613 | $267,753,613 | $139,704,346 | $407,457,959 |
| Lima | 189 | $14,730,557 | $7,559,574 | $22,290,131 |
| Unincorporated County | 2,931 | $602,492,024 | $389,117,467 | $991,609,491 |
| **Total** | **4,733** | **$884,976,194** | **$536,381,386** | **$1,421,357,580** |

Source: MSDI Cadastral database, https://msl.mt.gov/geoinfo/msdi/cadastral/

Total building exposure with contents within Beaverhead County based on an analysis of improved parcels is over $1.4 billion, with almost $885 million in improved value properties and over $536 million of contents. Of the over $1.4 billion of total building exposure in Beaverhead County, the City of Dillon accounts for over $407 million of this total number. Residential properties represent the greatest portion of structures in the County, accounting for over $1.05 billion of the over $1.4 billion improved property value. This is shown in Table A-7 below.

**Table A-7 Beaverhead County Total Exposure by Jurisdiction and Property Type**

| Jurisdiction | Property Type | Improved Parcels | Improved Value | Content Value | Total Value |
|---|---|---|---|---|---|
| **Dillon** | Commercial | 2 | $7,860 | $7,860 | $15,720 |

| Jurisdiction | Property Type | Improved Parcels | Improved Value | Content Value | Total Value |
|---|---|---|---|---|---|
| | Exempt | 30 | $11,637,658 | $11,637,658 | $23,275,316 |
| | Residential | 1,578 | $256,098,535 | $128,049,268 | $384,147,803 |
| | Vacant | 3 | $9,560 | $9,560 | $19,120 |
| | **Total** | **1,613** | **$267,753,613** | **$139,704,346** | **$407,457,959** |
| **Lima** | Agricultural | 1 | $99,070 | $99,070 | $198,140 |
| | Commercial | 1 | $13,830 | $13,830 | $27,660 |
| | Exempt | 2 | $272,270 | $272,270 | $544,540 |
| | Residential | 183 | $14,341,967 | $7,170,984 | $21,512,951 |
| | Vacant | 2 | $3,420 | $3,420 | $6,840 |
| | **Total** | **189** | **$14,730,557** | **$7,559,574** | **$22,290,131** |
| **Beaverhead County** | Agricultural | 612 | $152,440,960 | $152,440,960 | $304,881,920 |
| | Commercial | 3 | $73,420 | $73,420 | $146,840 |
| | Exempt | 22 | $3,948,550 | $3,948,550 | $7,897,100 |
| | Industrial | 3 | $8,556,460 | $12,834,690 | $21,391,150 |
| | Mining | 14 | $948,800 | $948,800 | $1,897,600 |
| | Residential | 2,231 | $435,305,575 | $217,652,788 | $652,958,363 |
| | Vacant | 46 | $1,218,259 | $1,218,259 | $2,436,518 |
| | **Total** | **2,931** | **$602,492,024** | **$389,117,467** | **$991,609,491** |
| | **Grand Total** | **4,733** | **$884,976,194** | **$536,381,386** | **$1,421,357,580** |

Source: MSDI Cadastral database, https://msl.mt.gov/geoinfo/msdi/cadastral/

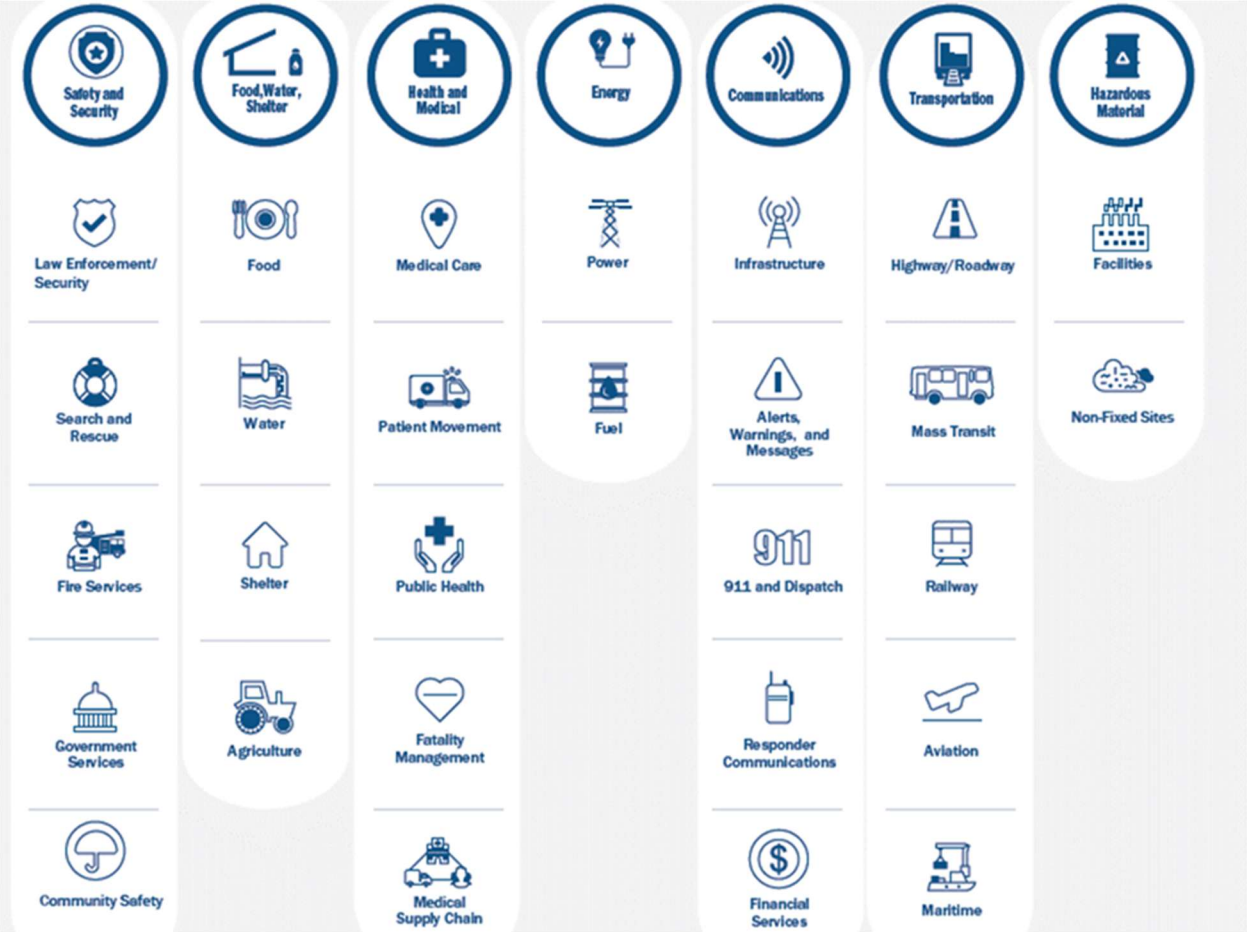
### Critical Facilities, Infrastructure, and Other Important Community Assets

A critical facility is defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. Much of this data is based on GIS databases associated with the 2022 Homeland Infrastructure Foundation-Level Data (HIFLD). Other critical facility databases were also used, such as the National Bridge Inventory (NBI), with supplementation from the HMPC. Where applicable, this information was used in an overlay analysis for hazards such as dam failure, flood, and wildfire.

FEMA organizes critical facilities into seven lifeline categories as shown in Figure A-5. These lifeline categories standardize the classification of critical facilities and infrastructure that provide indispensable service, operation, or function to a community. A lifeline is defined as providing indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security. These categorizations are particularly useful as they:

- Enable effort consolidations between government and other organizations (e.g., infrastructure owners and operators).
- Enable integration of preparedness efforts among plans; easier identification of unmet critical facility needs.
- Refine sources and products to enhance awareness, capability gaps, and progress towards stabilization.
- Enhance communication amongst critical entities, while enabling complex interdependencies between government assets.
- Highlight lifeline related priority areas regarding general operations as well as response efforts.

**Figure A-5 FEMA Lifeline Categories**




Source: FEMA

Table A-8 below summarizes the number of critical facilities by jurisdiction. Figure A-6 through Figure A-8 display the location of critical facilities by FEMA Lifeline in Beaverhead County, the City of Dillon, and the Town of Lima.

**Table A-8 Beaverhead County Critical Facilities by Jurisdiction**

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Materials | Health and Medical | Safety and Security | Transportation | Total |
|---|---|---|---|---|---|---|---|---|
| Dillon | 5 | 1 | 8 | - | 1 | 11 | 5 | **31** |
| Lima | 2 | - | 2 | - | 1 | 4 | 2 | **11** |
| Beaverhead County | 36 | 18 | 13 | 1 | 3 | 12 | 230 | **313** |
| **Total** | **43** | **19** | **23** | **1** | **5** | **27** | **237** | **355** |

Source: HIFLD 2022, Montana DES, National Bridge Inventory

**Figure A-6 Beaverhead County Critical Facilities**

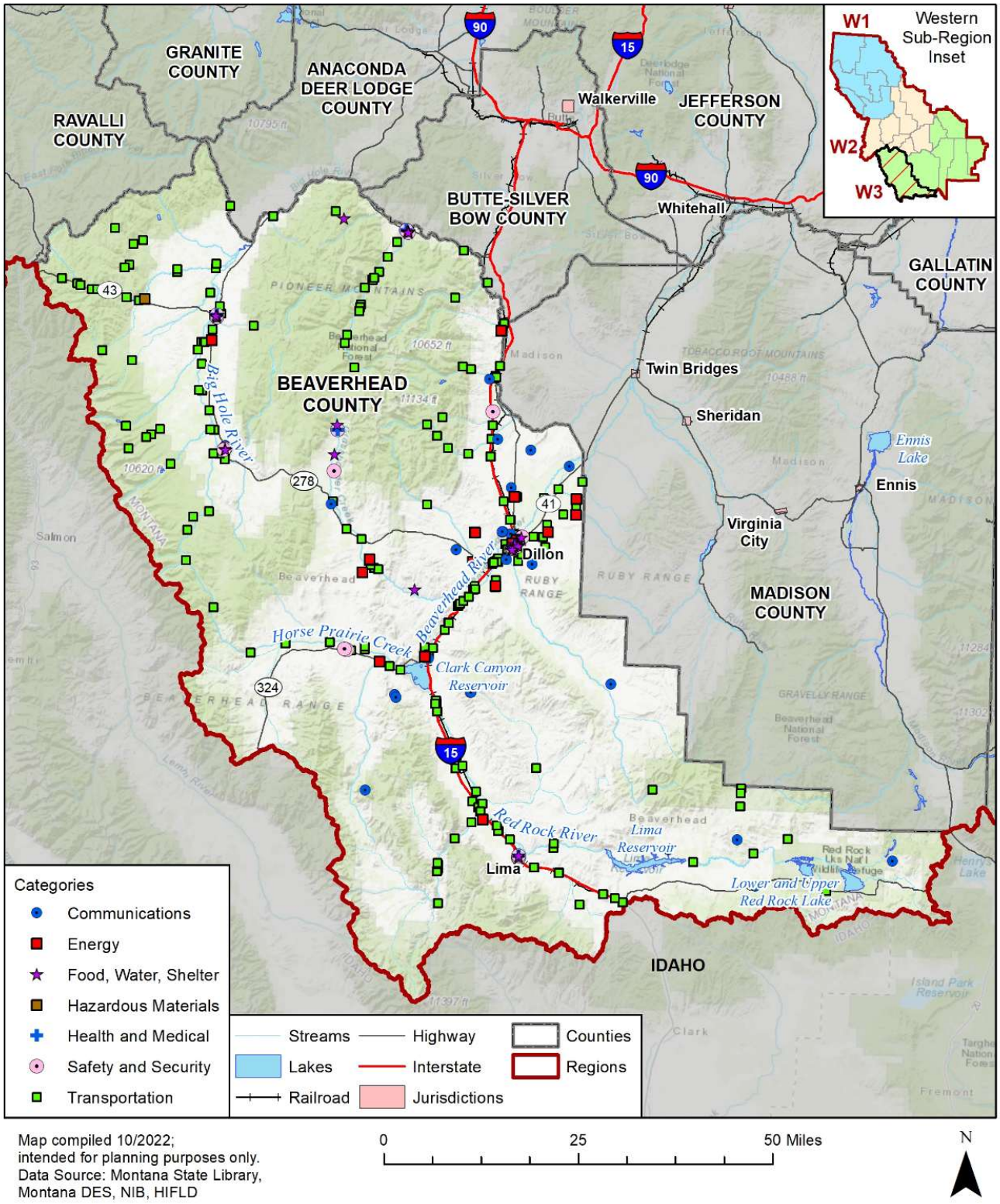
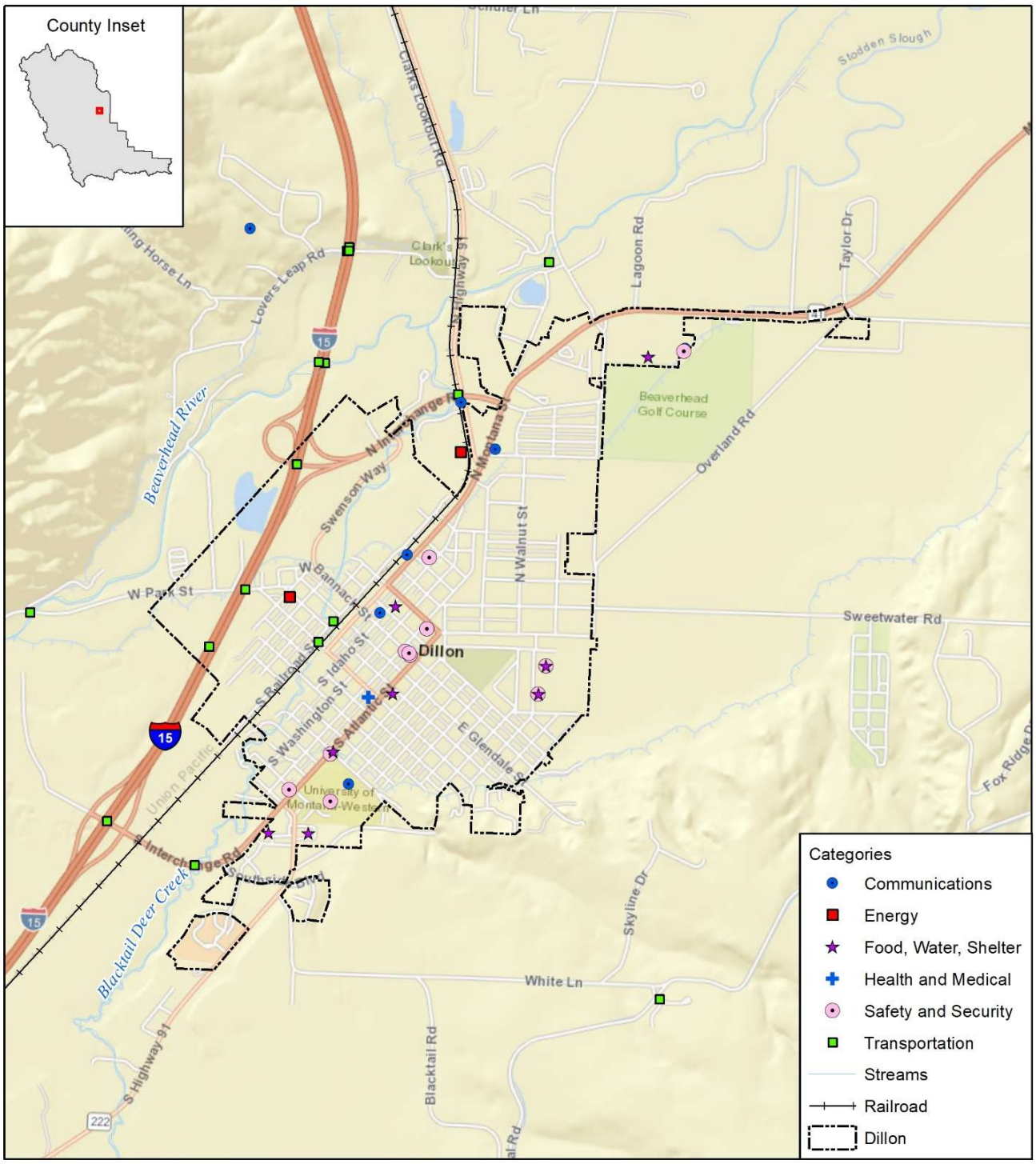
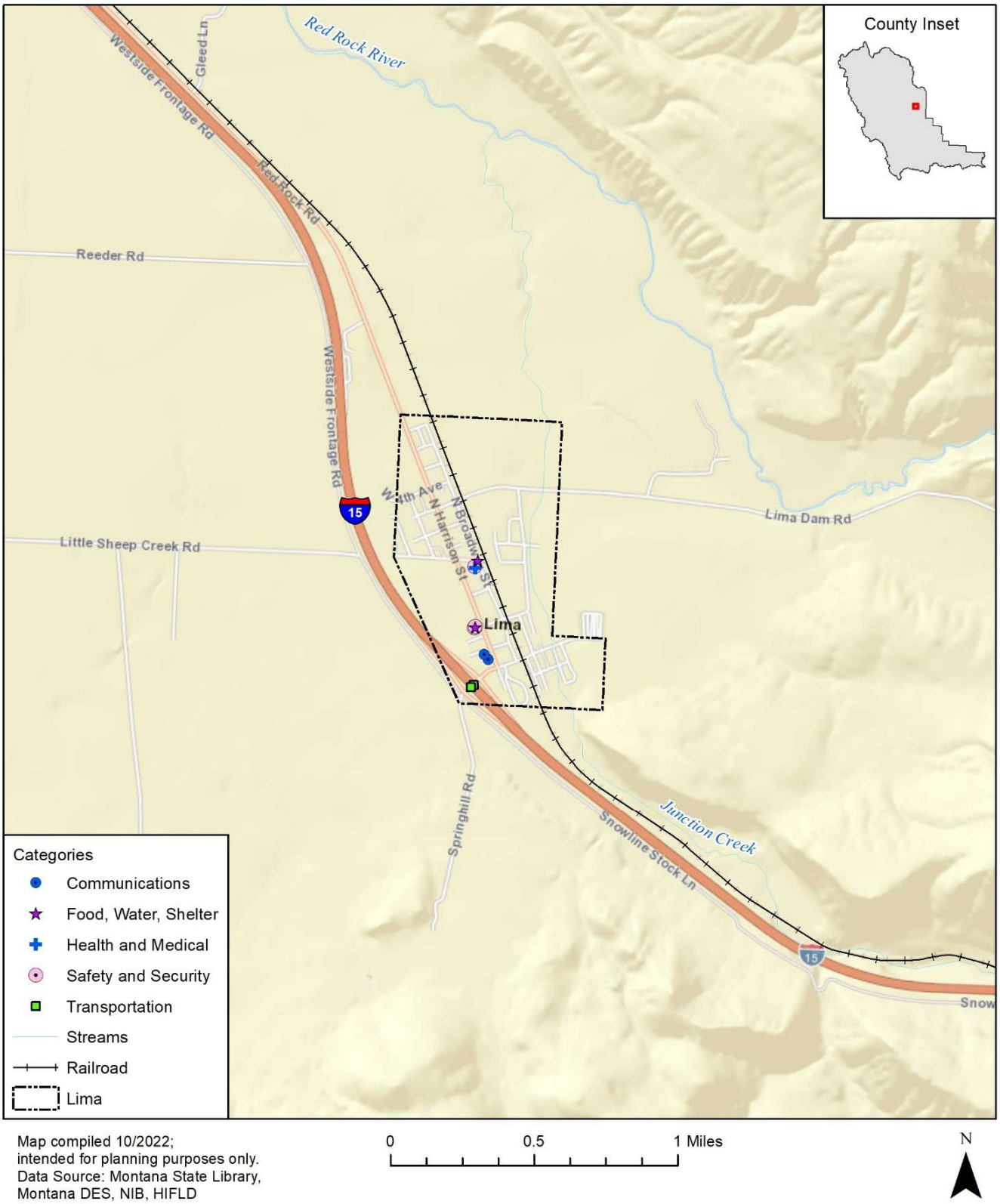


**Figure A-7 City of Dillon Critical Facilities**




Map compiled 10/2022;
intended for planning purposes only.
Data Source: Montana State Library,
Montana DES, NIB, HIFLD

**Figure A-8 Town of Lima Critical Facilities**



## Natural, Historic, and Cultural Assets

Assessing the vulnerability of Beaverhead County to hazards also involves inventorying the natural, historical, and cultural assets of the area. This step is important for the following reasons:

- The community may decide that these types of resources warrant more protection due to their unique and irreplaceable nature and contribution to the overall economy.
- If these resources are impacted by a hazard, knowing so ahead of time allows for more prudent care in the immediate aftermath, when the potential for additional impacts are higher.
- The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.
- Natural resources can have beneficial functions that reduce the impacts of natural hazards, such as wetlands and riparian habitat, which help absorb and attenuate floodwaters.

### *Historic and Cultural Assets*

By definition, a historic property not only includes buildings or other types of structures, such as bridges and dams, roads, byways, historic landscapes, and many other features. The National Register of Historic Places, managed by the National Park Service and U.S. Department of Interior, is the nation's official list of cultural resources worthy of preservation. Table A-9 below lists the properties that are identified as having cultural and historic significance in Beaverhead County as recorded by the National Register of Historic Places.

**Table A-9 Historic Properties and Districts on National Registers**

| Property Name | City/Town | Location | Date Listed |
|---|---|---|---|
| Tash Ranch | City unavailable | | N/A |
| Andrus Hotel | Dillon | 45 E. Glendale St. | 12/2/2019 |
| Bannack Historic District | Dillon | 22 mi. from Dillon off MT 278 | 10/15/1966 |
| Barrett Hospital | Dillon | Chapman and S. Atlantic Sts. | 1/18/1985 |
| Barrett, Martin, House | Dillon | 733 S. Pacific | 1/28/1987 |
| Birch Creek CCC Camp | Dillon | N of Dillon on US FS Rd. 98 | 12/7/1982 |
| Canyon Resort Airways Beacon | Dillon | Above Pipe Organ Rock, 15 mi. S of Dillon | 9/19/2019 |
| Clark's Lookout, August 13, 1805 | Dillon | W side US 91, 500 ft. N of Beaverhead R. | 3/10/1994 |
| Dillon City Hall Historic District | Dillon | 125 N. Idaho St. | 12/2/2019 |
| Dillon City Library | Dillon | 121 S. Idaho St. | 11/14/1978 |
| Henneberry, William F., Homestead | Dillon | 13 mi. SW. of Dillon | 9/19/2019 |
| Hotel Metlen | Dillon | 5 S. Railroad Ave. | 12/13/1983 |
| Lamarche Game Trap | Dillon | Address Restricted | 9/28/1976 |
| Montana State Normal School | Dillon | 710 S. Atlantic St. | 8/27/1980 |
| Oregon Short Line Passenger Depot | Dillon | S. Montana St. | 4/19/1990 |
| US Post Office--Dillon Main | Dillon | 117 S. Idaho St. | 3/14/1986 |
| Van Camp--Tash Ranch | Dillon | 1200 MT 278 | 4/16/2008 |
| Big Hole River Bridge | Glen | Burma Rd., Glen Twin Bridges Rd. | N/A |

| Property Name | City/Town | Location | Date Listed |
|---|---|---|---|
| Browne's Bridge | Glen | Browne's Bridge Fishing Access Site | 1/4/2010 |
| Brown's Bridge | Glen | Local Rd.: 067, crosses the Big Hole River 4 1/2 mi. N of Glen | N/A |
| Glen-Twin Bridges Road Bridge | Glen | Burma Rd., Glen-Twin Bridges Rd. | N/A |
| Canyon Creek Charcoal Kilns | Glendale | Approx. 5 mi. NW of Glendale on Forest Rd. 187 | 6/2/2005 |
| South Everson Creek Quarry 24-BR-559 | Horse Prairie | | N/A |
| Sheep Creek Wickiup Cave | Lima | Address Restricted | 9/23/1981 |
| Hecla House | Melrose | Approx. 11 mi. W of Glendale on Trapper Creek Rd. #188 | 8/10/2005 |
| Big Hole National Battlefield | Wisdom | 12 mi. W of Wisdom | 10/15/1966 |
| Elkhorn-Coolidge Historic District | Wise River | Forest Service Rd. #2465, approximately four miles SE. of jct. with MT 43 | 9/12/2008 |

Source: National Register of Historic Places, https://irma.nps.gov/DataStore/Reference/Profile/2210280

### Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands preserves sensitive habitats as well as attenuates and stores floodwaters.

Wetlands are a valuable natural resource for communities, due to their benefits to water quality, wildlife protection, recreation, and education, and play an important role in hazard mitigation. Beaverhead County encompasses several lakes and reservoirs, including Ennis Lake, Clark Canyon Reservoir, Lima Reservoir, and Lower and Upper Red Rock Lake. one lake, Bear Creek Reservoir. There are also several reservoirs in Beaverhead County. A few rivers and creeks also go through the County, including Horse Prairie Creek, Red Rock River, Big Hole River, and Beaverhead River.

### Endangered Species

A table of endangered and threatened species in the State of Montana, as identified by the U.S. Fish and Wildlife Service, Montana Ecological Services Field Office, can be found in the Assets Summary Section in Chapter 4 of the base plan.

## A.4 Vulnerability to Specific Hazards

Vulnerability to hazards that can affect the Western Region is described in Section 4.2 *Hazard Profiles* of the Western Region base plan. The analysis of vulnerability in the base plan includes the type, location, and extent of hazards. In addition, the base plan provides an analysis of the vulnerability of six classes of assets: (1) People, (2) Property, (3) Critical Facilities and Lifelines, (4) the Economy, (5) Historic and Cultural Resources, and (6) Natural Resources. Subsections within Section 4.2 of the Western Region base plan provide descriptions and analysis of the exposure of each asset class to each hazard, the susceptibility of each asset class to damage from exposure to each hazard, and the overall vulnerability of each class of asset to each hazard.

This section details vulnerability to specific hazards, where quantifiable, only where it differs from that of the Region as a whole. The results of detailed GIS analyses used to estimate potential for future losses are

presented here, in addition to maps of hazard areas and details by jurisdiction and building type. For a discussion of the methodology used to develop the loss estimates, refer to Chapter 4 of the base plan. In many cases Chapter 4 contains information that differentiates the risk by county thus the information is not duplicated here. For most of the weather-related hazards the exposure does not vary significantly from the rest of the Region and thus the reader should refer to Chapter 4. Only unique issues or vulnerabilities are discussed, where applicable.

Hazards considered in this HMP update annex are as follows.

- Avalanche
- Communicable Disease
- Cyber-Attack
- Dam Failure
- Drought
- Earthquake
- Flooding
- Hazardous Materials Incident
- Landslide
- Severe Summer Weather
- Severe Winter Weather
- Human Conflict
- Tornadoes & Windstorms
- Transportation Accidents
- Volcanic Ash
- Wildfire

### A.4.1 Avalanche

Avalanche is a low significance hazard for Beaverhead County across all jurisdictions. The FEMA NRI annualized frequency of avalanche events in the County is .02, considered "very low," with 1 avalanche recorded in the SHELDUS database between January 1960 and December 2019. The Risk Index Rating for avalanches in the County, which accounts for expected annual loss, social vulnerability, and community resilience, is considered "very low" with a score of 5.9. Due to the remote nature of avalanche events, risk is highest in the unincorporated County and lower in incorporated jurisdictions, but still considered low overall due to these considerations.

Refer to Chapter 4 for a discussion of the avalanche risk relative to Beaverhead County and the Western Region.

### A.4.2 Communicable Disease

All populations are vulnerable to communicable disease. Elderly populations, young children, and individuals with pre-existing medical conditions may be likely to face long lasting impacts from communicable diseases, depending on the disease. While areas of higher population density, such as the City of Dillon, are likely to experience a greater number of cases due to a larger population, these larger cities also have greater access to medical resources. Communicable disease is rated as **medium** for all counties in the Western Region and there were no noted differences in rating of communicable disease by jurisdiction in Beaverhead County.

Refer to Chapter 4 for a discussion of the communicable disease risk relative to Beaverhead County and the Western Region.

### A.4.3 Cyber-Attack

All servers, networks, and users are vulnerable to cyber-attacks in Western Montana. Beaverhead County is rated as **medium**, along with most other counties in the Region. There have been no recorded cyber-attack events occurring in the county or its jurisdictions, however, minor cyber-attacks such as phishing emails often go unreported. While all networks and servers are vulnerable to cyber, the City of Dillon has a greater population and therefore more people exposed to a cyber-attack event.

Refer to Chapter 4 for a discussion of the cyber-attack risk relative to Beaverhead County and the Western Region.

### A.4.4 Dam Failure

The significance of dam failure in Beaverhead County is rated as **medium** across all jurisdictions (Table A-5). Beaverhead County is affected by seven high hazard dams and four significant hazard dams, all located within the county. Table A-10 below identifies the dams and the nearest downstream cities which could potentially be impacted in a dam failure or incident. Refer to Chapter 4 for a discussion of the dam failure risk relative to Beaverhead County and the Western Region.

**Table A-10 Dams in Beaverhead County**

| Hazard Class | Dam Name | Owner | River | Nearest Downstream City | Distance to Nearest Downstream City (Miles) | Emergency Action Plans (EAP) |
|---|---|---|---|---|---|---|
| High | Boot Lake Dam | Beaverhead Water Co. | Birch Creek | Twin Bridges | 40 | No |
| High | Pear Lake Dam | Beaverhead Water Co. | Birch Creek | Twin Bridges | 40 | No |
| High | Agnes Lake | Burk Ranches Inc. | Agnes Creek | Glen | 14 | No |
| High | Anchor South Dam | Beaverhead Water Co. | TR-Birch Creek | Twin Bridges | 40 | No |
| High | Lima | Beaverhead County Red Rock River Water/Sewer Dist. | Red Rock River | Lima | 12 | Yes |
| High | Kelly Dam | Rattlesnake Reservoir Co. | Rattlesnake Creek | Argenta | 5 | Yes |
| High | Clark Canyon | Reclamation | Beaverhead River | Dillon | 20 | Yes |
| Significant | Peet Creek Dam | Matador Cattle Co. | Peet Creek | Lima | 30 | No |
| Significant | Deerhead Lake Dam | D J Marchesseault | Bond Creek | Silver Star | 45 | Not Required |
| Significant | Tub Lake Dam | Beaverhead Water Co. | Birch Creek | Twin Bridges | 40 | Not Required |
| Significant | Mussigbrod Lake Dam | Blanch Buck | Mussigbrod Creek | Melrose | 60 | Not Required |

Source: National Inventory of Dams (NID)

Dam failure flooding could result in losses to recreational tourism, ecosystems, property and human life. Figure A-9 displays the location of dams in Beaverhead County. Table A-11 summarizes the estimated number of improved parcels, building values, and people within inundation zones in Beaverhead County by property type (limited to high hazard dams with available dam inundation maps).

Dam inundation maps are available for only Lima Dam and Kelly Dam, shown in Figure A-9 as purple shaded areas. Inundation maps are unavailable for five of the seven HHPDs and none of the Significant Hazard

dams. The analysis of dam assets within inundation areas was performed only for the two dams that have available inundation maps (Table A-11). The lack of an inundation area for Clark Canyon Dam is particularly notable. Figure A-9 shows the inundation area of Lima Dam as it flows through Clark Canyon Reservoir/Dam and continues to the town of Dillon and beyond. This exposes 37% of Lima's population. However, Clark Canyon Dam holds 2.4 times more water than Lima Dam and is much closer to the town of Lima. The true exposure to Lima could be much larger than what is captured in Table A-11.

Beaverhead County has a cumulative value of $330.7 million in property exposed to available HHPD dam inundation areas. Of this sum, residential property types represent the greatest total number of improved parcels and most property value, with approximately $274.3 million in total property value at risk. This is the largest amount of any property type exposed to a potential dam failure.

**Table A-11 Beaverhead County Parcels at Risk to Dam Inundation by Property Type**

| Jurisdiction | Property Type | Improved Parcels | Improved Value | Content Value | Total Value | Population |
|---|---|---|---|---|---|---|
| Dillon | Commercial | 2 | $7,860 | $7,860 | $15,720 | |
| | Exempt | 18 | $5,500,147 | $5,500,147 | $11,000,294 | |
| | Residential | 679 | $114,561,268 | $57,280,634 | $171,841,902 | 1,439 |
| | Vacant | 3 | $9,560 | $9,560 | $19,120 | |
| Beaverhead County | Agricultural | 43 | $12,862,260 | $12,862,260 | $25,724,520 | |
| | Commercial | 2 | $70,000 | $70,000 | $140,000 | |
| | Exempt | 2 | $233,150 | $233,150 | $466,300 | |
| | Industrial | 2 | $7,591,280 | $11,386,920 | $18,978,200 | |
| | Residential | 373 | $68,322,414 | $34,161,207 | $102,483,621 | 791 |
| | Vacant | 3 | $35,610 | $35,610 | $71,220 | |
| | **Total** | **1,127** | **$209,193,549** | **$121,547,348** | **$330,740,897** | **2,230** |

Source: County Assessor data, NID, MT DNRC, WSP GIS Analysis

SoVI-based social vulnerability in Beaverhead County is similar to other counties in the Western Region and somewhat lower (less vulnerable) than most counties in Montana (Section A.2.4 Social Vulnerability). This rating is largely due to a concentration of lower income households with a high housing-cost burden and the proportion of especially young and old people in the county (Section A.2.4 Social Vulnerability, Table A-2). Dam failure hazards can be devastating both financially and emotionally. Socio-economic vulnerability amplifies the financial and mental stress of dam failure and often makes it difficult for people to recover. Dam failure may result in injuries or fatalities in situations with limited warning or when evacuation orders are not adhered to. Access and functional needs populations may have challenges with evacuations.

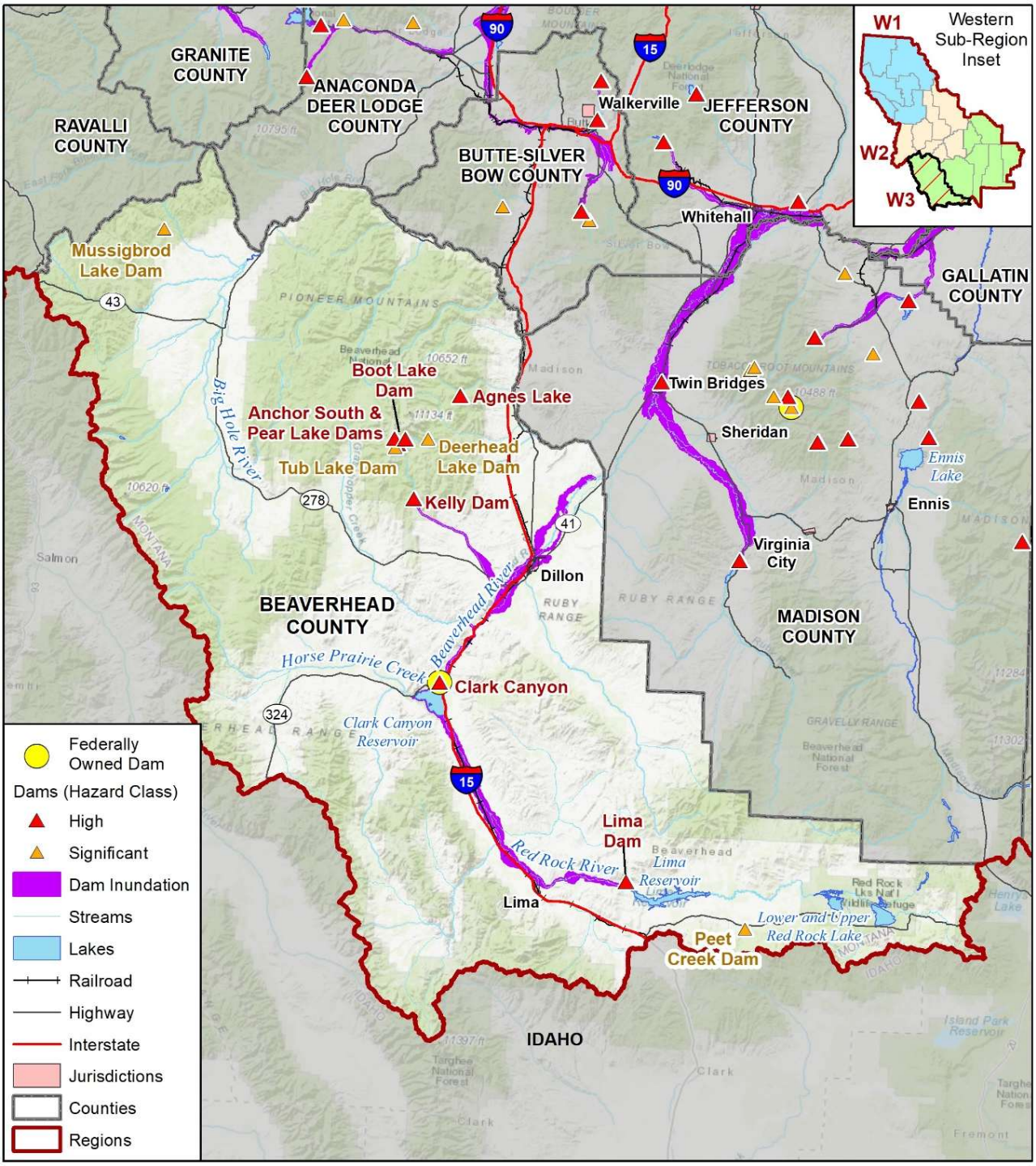
Beaverhead County has a total of 76 critical facilities exposed to dam inundation. Of this number 60 are categorized in the transportation sector and mostly consist of non-scour and scour bridges. There are six located in the safety and security sectors, four in the communications sectors, three in the energy sector and two in the food, water and shelter sector. There is also one located in the health and medical sector. Each of these are shown in Table A-12 below.

**Table A-12 Beaverhead County Critical Facilities at Risk to Dam Inundation by FEMA Lifeline**

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Materials | Health and Medical | Safety and Security | Transportation | Total |
|---|---|---|---|---|---|---|---|---|
| Dillon | 3 | 1 | 2 | - | 1 | 6 | 5 | **18** |
| Beaverhead County | 1 | 2 | - | - | - | - | 55 | **58** |
| **Total** | **4** | **3** | **2** | **0** | **1** | **6** | **60** | **76** |

Source: Montana DNRC Dam Safety Program, Montana State Library, BIA, NID, HIFLD 2022, Montana DES, NBI

**Figure A-9 Beaverhead County Dam Inundation**




Map compiled 10/2022;
intended for planning purposes only.
Data Source: Montana State Library,
NID, MT DNRC Dam Safety Program

## A.4.5 Drought

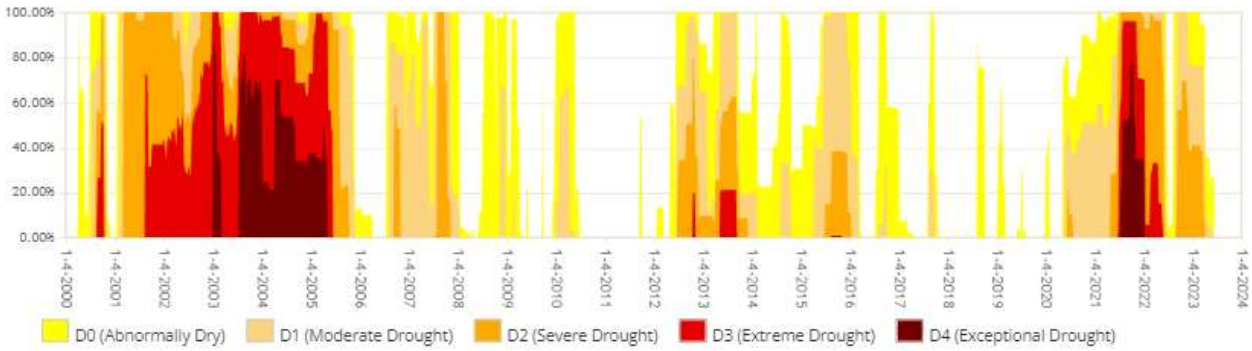
Drought was rated as a **high** significance hazard in Beaverhead County and all jurisdictions (Table A-5). With 25 USDA drought disaster declarations from 2012-2021, Beaverhead County has had more declarations than any other county in Western Montana. These drought declarations occurred in 2012, 2014, 2015, and 2021.

The Drought Impact Reporter recorded 19 drought impact report in Beaverhead County between 2000-2023. These impacts reported fishing closures on the Beaverhead River due to stress to fish induced by high water temperatures, water use conservation measures for the Big Hole River due to low water levels and increased water temperatures, low hay supplies due to drought, and smoldering wildfires at-risk of reigniting due to dry conditions. Additionally, the HMPC noted they have been experiencing ongoing impacts from droughts Countywide since 2019 which has caused property damage, crop damage, and economic impacts.

The U.S. Drought Monitor (USDM) is a national data set released weekly, showing the severity of drought in locations across the nation. Figure A-10 displays a time series showing the severity of drought in Beaverhead County between 2000 and 2023. The figure indicates that the county experienced significant drought (D4) in the years 2003, 2004-2005, and 2021.

Refer to Chapter 4 for a discussion of the drought risk relative to Beaverhead County and the Western Region.

**Figure A-10 Beaverhead County Percent Area in USDM Categories**




Source: USDM; www.drought.gov

## A.4.6 Earthquake

There are several known fault systems throughout the State of Montana, mostly concentrated in the Western Region. The potential severity of shaking and impacts to casualties and damage is not uniform across the Western Region and is likely to have a greater impact to counties in the northern portion of the region. The earthquake hazard in Beaverhead County an all participating jurisdictions is therefore rated as **low** overall significance (Table A-5).

According to a Hazus probabilistic loss analysis conducted for a scenario with 2% in 50 years recurrence, Beaverhead County has low to moderate economic losses when compared to the rest of the counties in the Western Region. These losses are predicted to be uniform across the jurisdictions in the County. The probabilistic scenario estimated $106,491,000 in total economic losses (2.4% of total losses in the region) are likely to occur during an earthquake event in the County. Older and historic buildings will be more vulnerable to earthquake shaking, though Beaverhead County and its jurisdictions have not adopted

building codes, which may also make newer construction vulnerable to earthquake hazards. Refer to Chapter 4 for a discussion of the earthquake risk relative to Beaverhead County and the Western Region.

### A.4.7 Flooding

Flooding is rated as a **medium** significance hazard in Beaverhead County, the City of Dillon, and the Town of Lima (Table A-5). Nearly 12% of the population of Beaverhead County resides within the 1% chance floodplain. This includes 4% and 51% of the populations of Dillon and Lima, respectively.

SoVI-based social vulnerability in Beaverhead County is similar to other counties in the Western Region and somewhat lower (less vulnerable) than most counties in Montana (Section A.2.4 Social Vulnerability). This rating is largely due to a concentration of lower income households with a high housing-cost burden and the proportion of especially young and old people in the county (Section A.2.4 Social Vulnerability, Table A-2). Flooding can be devastating both financially and emotionally. Socio-economic vulnerability amplifies the financial and mental stress of flood hazards and often makes it difficult for people to recover. Flooding may result in injuries or fatalities in situations with limited warning or when evacuation orders are not adhered to. Access and functional needs populations may have challenges with evacuations.

Table A-13 summarizes the building counts and improved value of parcels in the County that fall within the 1% chance floodplains. The table also summarizes loss estimate values, which are calculated based upon the improved value and estimated contents value and assumes a two-foot-deep flood, which usually results in damages approximately 25% of the total value, based on FEMA depth-damage curves. Beaverhead County currently has no FEMA NFHL data available. Therefore, Montana's DNRC flood hazard data layers were supplied along with supplemental Hazus and FEMA Preliminary floodplain data. This was the information used to perform this analysis. All participating jurisdictions in Beaverhead County contain structures located in the floodplain (Figure A-11 through Figure A-13).

Table A-13 indicates the estimated flood losses in each applicable jurisdiction in Beaverhead County, the unincorporated areas of Beaverhead County have the greatest numbers of properties at risk and highest estimated losses. The majority of the properties at risk in the unincorporated areas are residential. There is a total value of $74.7 million in improved values and over $28 million in estimated losses to residential properties. This is the largest amount of all property types.

Overall, there are a total of 527 residential properties located in Beaverhead County's Special Flood Hazard Area (SFHA). These properties cumulatively have $89.5 million in improved property value. Of this total Beaverhead County's residential areas have an estimated loss value of nearly $33.6 million.

Beaverhead County has a total of four critical facilities exposed to the SFHA. Two are categorized in the transportation sector, one in the energy sector and one in the food, water and shelter sector. This is shown in Table A-14.

**Table A-13 Beaverhead County Parcels at Risk to 1% Flood Hazard by Jurisdiction**

| Jurisdiction | Property Type | Improved Parcels | Improved Value | Content Value | Total Value | Estimated Loss | Population |
|---|---|---|---|---|---|---|---|
| Dillon | Exempt | 1 | $20,480 | $20,480 | $40,960 | $10,240 | |
| | Residential | 75 | $10,551,703 | $5,275,852 | $15,827,555 | $3,956,889 | 159 |
| | Vacant | 1 | $990 | $990 | $1,980 | $495 | |
| Lima | Commercial | 1 | $13,830 | $13,830 | $27,660 | $6,915 | |
| | Residential | 51 | $4,289,150 | $2,144,575 | $6,433,725 | $1,608,431 | 108 |
| Beaverhead County | Agricultural | 76 | $20,479,090 | $20,479,090 | $40,958,180 | $10,239,545 | |
| | Commercial | 2 | $70,000 | $70,000 | $140,000 | $35,000 | |

| Jurisdiction | Property Type | Improved Parcels | Improved Value | Content Value | Total Value | Estimated Loss | Population |
|---|---|---|---|---|---|---|---|
| | Exempt | 1 | $268,140 | $268,140 | $536,280 | $134,070 | |
| | Residential | 401 | $74,755,548 | $37,377,774 | $112,133,322 | $28,033,331 | 850 |
| | Vacant | 6 | $78,960 | $78,960 | $157,920 | $39,480 | |
| | **Total** | **615** | **$110,527,891** | **$65,729,691** | **$176,257,582** | **$44,064,395** | **1,117** |

Sources: DNRC, Hazus, FEMA NFHL

**Table A-14 Beaverhead County Critical Facilities at Risk to 1% Annual Chance of Flood Hazard by Facility Type**

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Materials | Health and Medical | Safety and Security | Transportation | Total |
|---|---|---|---|---|---|---|---|---|
| Dillon | - | - | - | - | - | - | 1 | **1** |
| Beaverhead County | - | 1 | 1 | - | - | - | 1 | **3** |
| **Total** | **0** | **1** | **1** | **0** | **0** | **0** | **2** | **4** |

Source: Montana DNRC, FEMA, HAZUS, HIFLD 2022, Montana DES, NBI

**Figure A-11 Beaverhead County Flood Hazard and Structures**

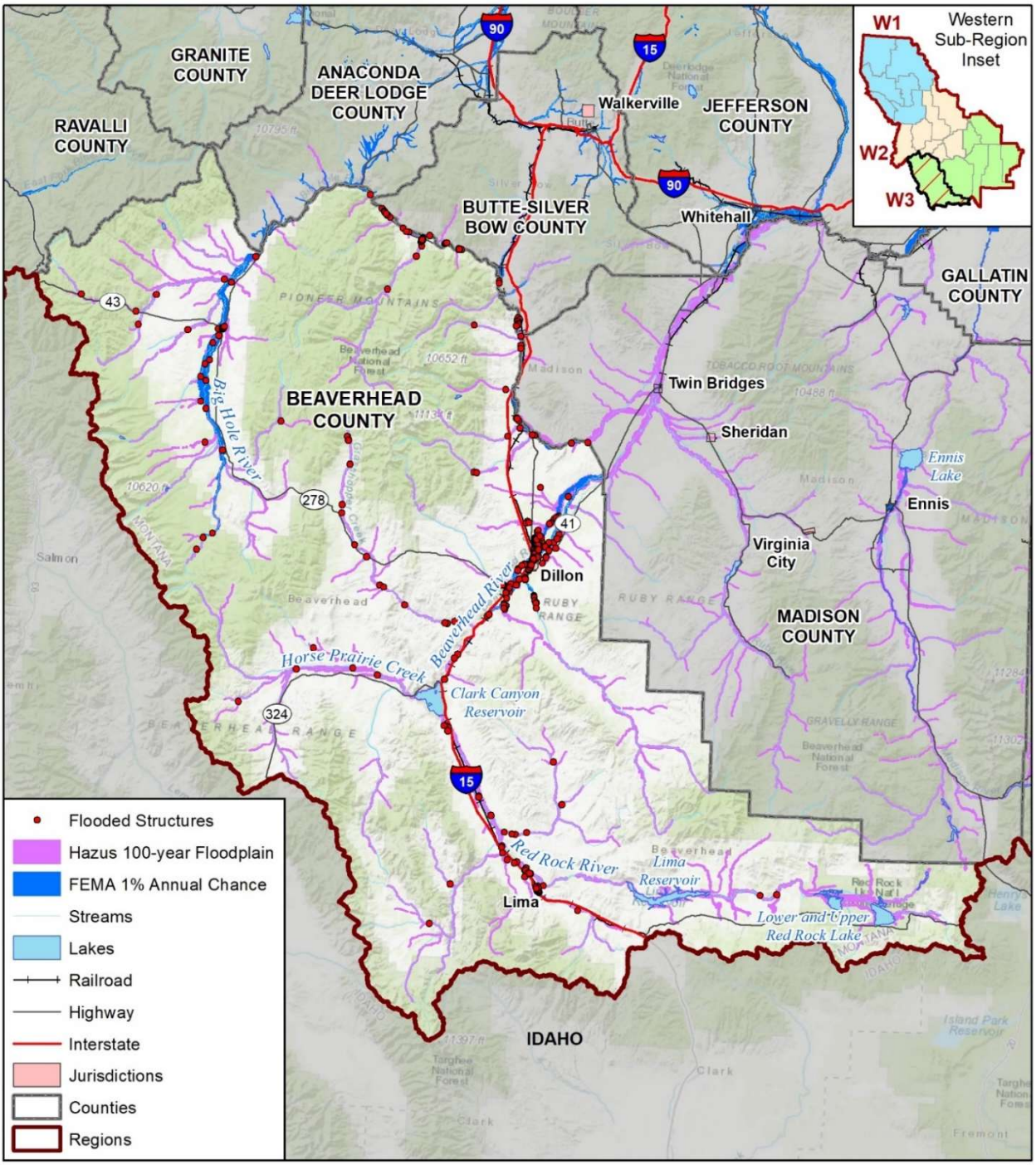


**Figure A-12 City of Dillon Flood Hazard and Structures**

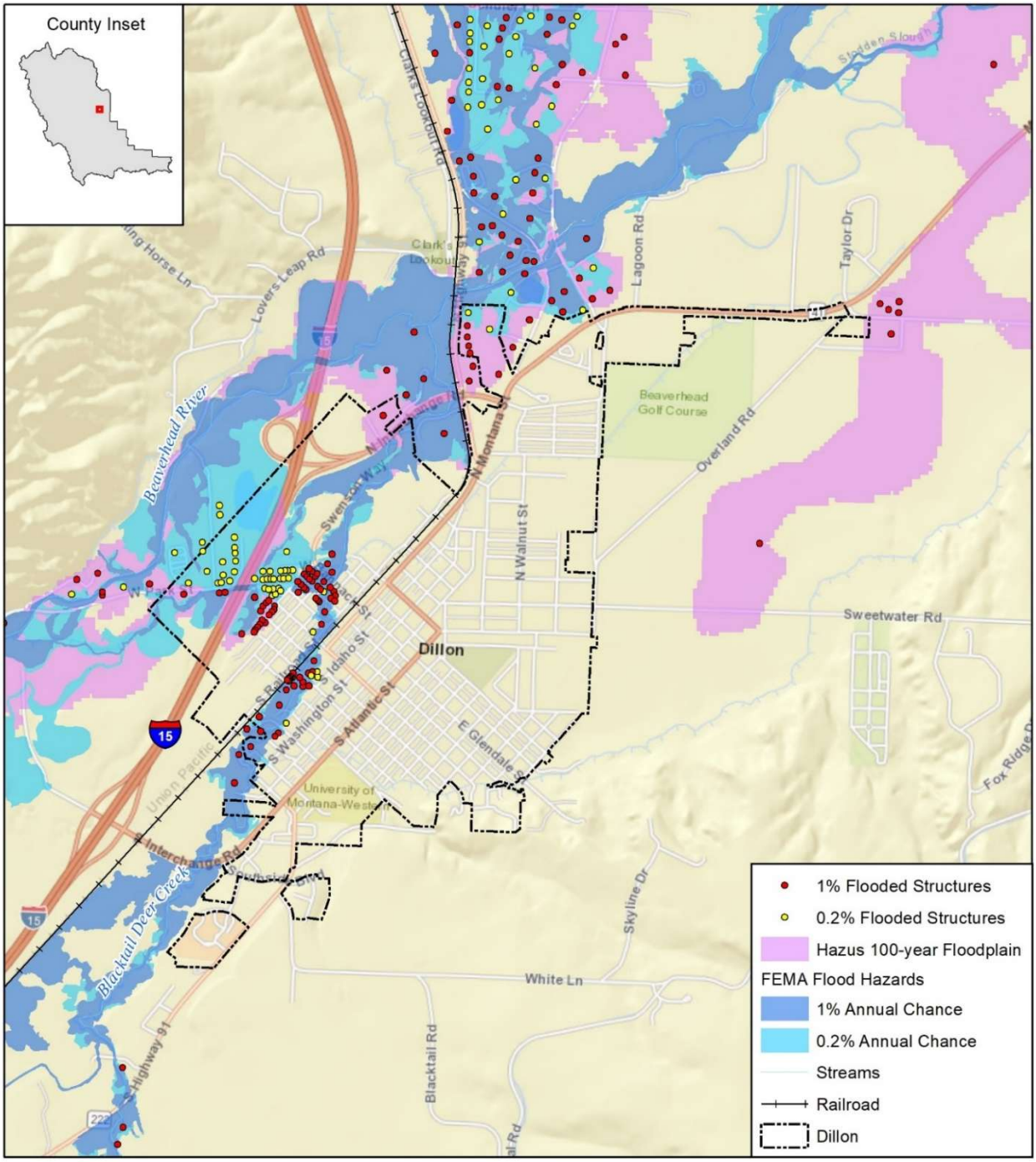


**Figure A-13 Town of Lima Flood Hazard and Structures**

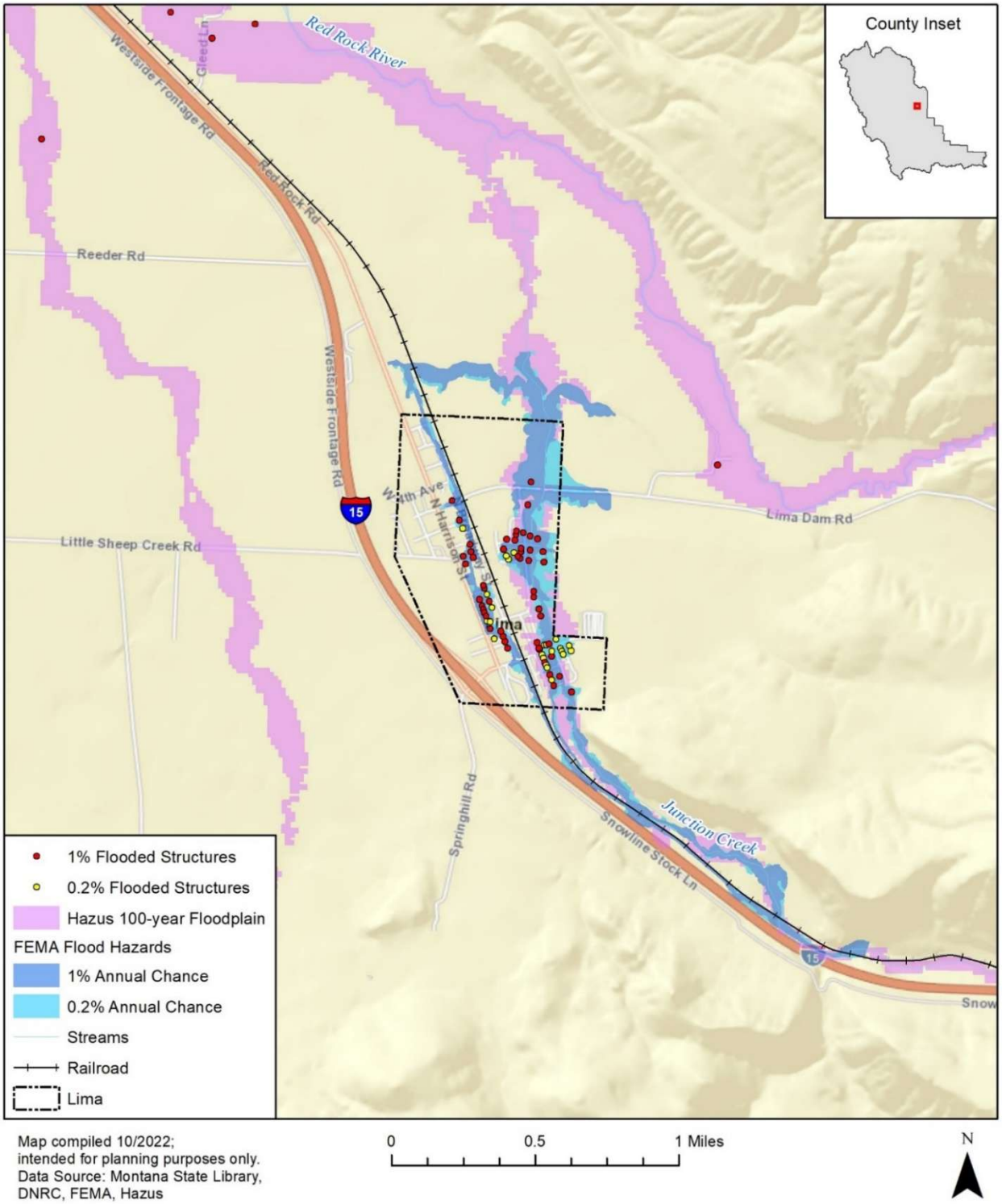
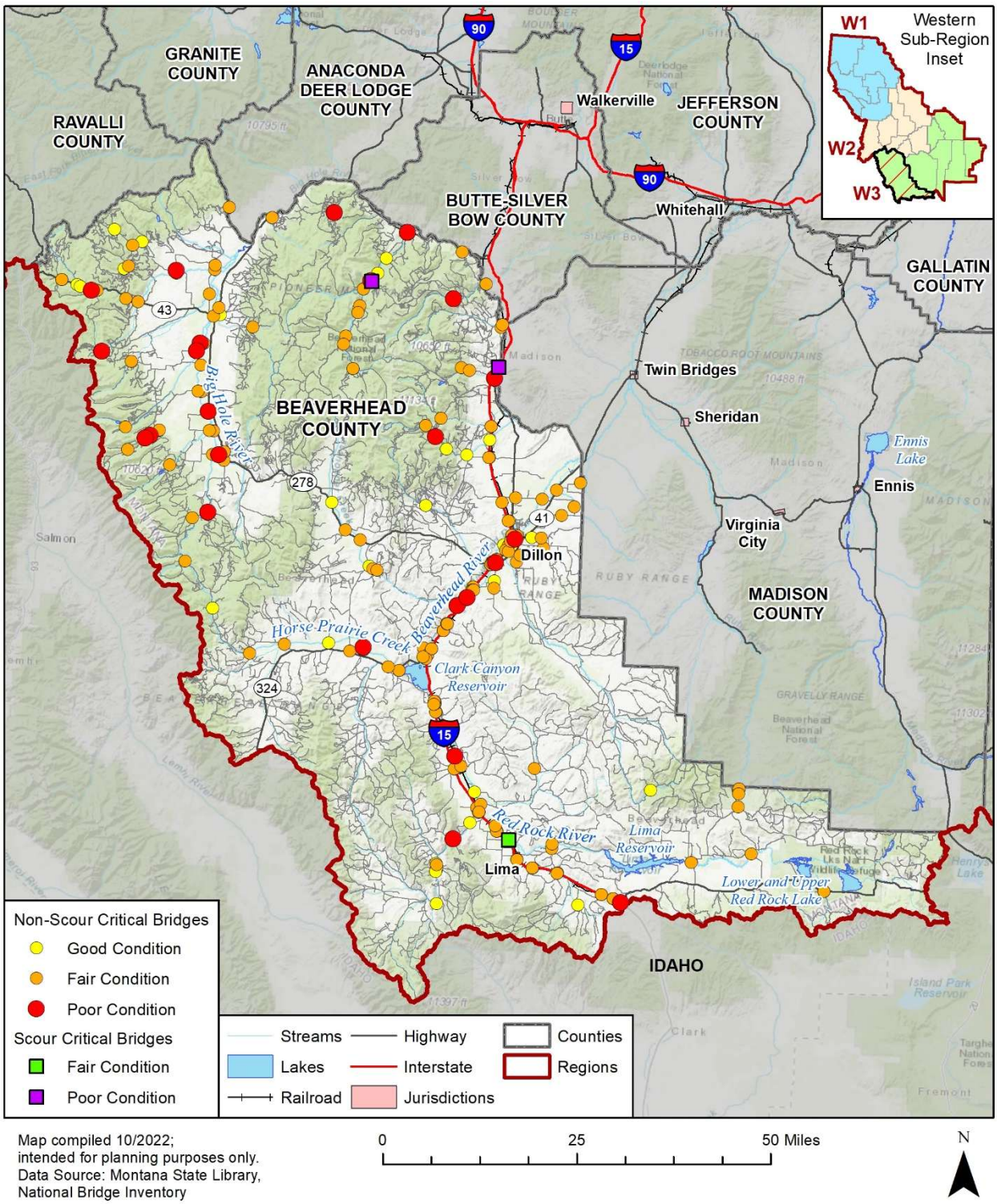


Figure A-14 below displays the location of bridges in Beaverhead County and their condition. A detailed characterization of exposure, susceptibility to damage, and vulnerability of each asset type is provided in Section 4.2.8 subsection *Vulnerability Analysis* in the base report.

**Figure A-14 Beaverhead County Bridges**



### A.4.8 Hazardous Materials Incident

Beaverhead County has rated hazardous materials incidents as a **low** overall significance hazard. There are no Risk Management Program (RMP) facilities located in Beaverhead County, however there are gas transmission pipelines in the county which pass nearby the Town of Dillon. There are also bulk propane and fertilizer storage facilities in the Dillon area. Interstate 15 traverses the county, as well as several other 2 lane Highways. Union Pacific Railroad enters the county from Idaho and ends at the port of Montana at Butte Silverbow. These are heavily traveled shipping and transportation routes for the state and country as a whole. Any of these routes could be a likely location for future incidents in transit. Additionally, 16 hazardous material incidents that have occurred in Beaverhead County since 1990. Interstate 15 traverses the county and is a heavily traveled shipping and transportation routes for the state and country as a whole. This route is a likely location for future incidents in transit.

Refer to Chapter 4 for a discussion of the hazardous materials incident risk relative to Beaverhead County and the Western Region.

### A.4.9 Landslide

Landslides are rated as a **low** overall significance hazard in Beaverhead County and all participating jurisdictions (Table A-5). Beaverhead County has a very low annualized frequency of landslides, and relatively low overall risk index and expected annual loss ratings, according to the National Risk Index. Compared to the rest Montana and the Western Region, landslides have not been the source of significant past damages or impacts and are not as great of a concern for the county. For more information, refer to Chapter 4 for a discussion of the landslide risk relative to Meagher County and the Western Region.

### A.4.10 Severe Summer Weather

Beaverhead County and all participating jurisdictions rated severe summer weather as a **medium** overall significance hazard (Table A-5). Beaverhead County experienced the fifth greatest number of total severe summer weather events in Western Region, including 51 hail events, 8 heavy rain events and 3 lightning events. There were no recorded excessive heat events in the county that resulted in losses, however, excessive heat events still occur in the county. Property losses from severe summer weather in Beaverhead County totaled to $10,000 from 1955 to 2022 (<1% of total losses in the Western Region), mainly due to the one hail event that happened on July 11, 1995. There was no recorded crop loss due to severe summer weather in Beaverhead County. Within Beaverhead County, greatest property losses and potential for injuries or fatalities are in the City of Dillon, where people and infrastructure are more concentrated.

Refer to Chapter 4 for a discussion of the severe summer weather risk relative to Beaverhead County and the Western Region.

### A.4.11 Severe Winter Weather

Beaverhead County and all participating jurisdictions rated severe winter weather as a **medium** overall significance hazard (Table A-5). The Beaverhead Zone experienced the 20th greatest number of recorded severe winter weather events in the Western Region and the NRI rated Beaverhead County as "relatively low" risk index rating for winter weather. None of the property losses recorded in the Western Region occurred in Beaverhead County. A detailed characterization of exposure, susceptibility to damage, and vulnerability of each asset type is provided in Section 4.2.12 subsection *Vulnerability Analysis* in the base report.

### A.4.12 Human Conflict

Human conflict is rated as an overall **medium** significance for Beaverhead County, along with nearly all other counties in the Western Region. In total, three terrorist attacks occurred between 1970-2020, 221 civil

unrest/protest events between January 2017 and January 2021, and no active shooter events occurred in the Montana Western Region. While no protest events or terrorist attacks were reported in Beaverhead County or its jurisdictions, the planning team believes that the risk significance should be rated as medium due to potential for future events in the County.

Refer to Chapter 4 for a discussion of the human conflict risk relative to Beaverhead County and the Western Region.

### A.4.13 Tornadoes & Windstorms

Beaverhead County and all participating jurisdictions rated tornadoes and windstorms as a **medium** significance hazard (Table A-5). The Beaverhead Zone experienced the tenth greatest number of high wind and strong wind events in the Western Region, with 60 total events. Additionally, Beaverhead County experienced the third greatest number of thunderstorm wind events and tornado events. Beaverhead County experienced the greatest losses from tornado events in the Western Region, with around $2.553 million in recorded damages. The NRI rated Beaverhead County as having the highest annualized frequency for tornadoes in the Western Region, together with Meagher County. All people and property are vulnerable to tornado and windstorms in Beaverhead County.

Refer to Chapter 4 for a discussion of the tornadoes and windstorms risk relative to Beaverhead County and the Western Region.

### A.4.14 Transportation Accidents

Beaverhead County rated transportation accidents as an overall **low** significance. Beaverhead County has seen 922 roadway crashes during the four-year period from 2016-2020. While transportation accidents can occur along any type of transportation route in the county and region, a greater frequency of accidents occur along heavily traveled roadways, such as Interstate 15 which runs through the county.

Refer to Chapter 4 for a discussion of the transportation accident risk relative to Beaverhead County and the Western Region.

### A.4.15 Volcanic Ash

All counties in the Western Region and all jurisdictions within Beaverhead County rated volcanic ash as an **low** significance hazard (Table A-5). Exposure throughout the County is largely uniform and dependent on the scale of volcanic activity impacting the region.

Refer to Chapter 4 for a discussion of the volcanic ash risk relative to Beaverhead County and the Western Region.

### A.4.16 Wildfire

Beaverhead County and all participating jurisdictions rated Wildfire as a **medium** significance hazard (Table A-5). According to GIS analysis conducted for this vulnerability assessment, Beaverhead County has approximately 7,984 individuals residing in wildfire risk areas, 85% of the total population. Dillon and Lima

SoVI-based social vulnerability in Beaverhead County is similar to other counties in the Western Region and somewhat lower (less vulnerable) than most counties in Montana (Section A.2.4 Social Vulnerability). This rating is largely due to a concentration of lower income households with a high housing-cost burden and the proportion of especially young and old people in the county (Section A.2.4 Social Vulnerability, Table A-2). Wildfire can be devastating both financially and emotionally. Socio-economic vulnerability amplifies the financial and mental stress of wildfire hazards and often makes it difficult for people to recover. Wildfire may result in injuries or fatalities in situations with limited warning or when evacuation orders are not adhered to. Access and functional needs populations may have challenges with evacuations.

Figure A-15 below displays the wildfire risk in Beaverhead County. As shown in the map, the majority of the county has high wildfire risk, with areas of very high risk in the northern areas of the county. Areas of very high and extreme wildfire risk are concentrated in the vicinity of Dillon and Lima, as well as along roadways and small pockets of WUI development throughout the county.

The CPT has noted wildfires which have occurred in recent years. Beaverhead County was involved in two federal disaster declarations for wildfire, both of which occurred in the summer of 2000. It is very likely that wildfires will continue to occur in the county in the future, especially in the summer months. As detailed in the regional base plan, trends indicate the wildfires are becoming larger, more frequent, and more numerous in Montana. Given this trend, wildfires in coming years may pose a very significant threat to the county and its municipality. Since wildfires typically result in a total building loss including contents, a large future wildfire presents a potentially severe scenario for losses in the county. Table A-15 below summarizes the estimated exposed value of improvements in each wildfire risk category. Approximately 4,733 improved parcels totaling $1.4 billion in improvement and content value are located in wildfire risk areas. See Chapter 4 in the base plan for details on the methodology of this analysis.

**Table A-15 Beaverhead County Parcels at Risk to Wildfire by Jurisdiction and Risk Rating**

| At Risk Rating | Jurisdiction | Improved Parcels | Improved Value | Content Value | Total Value | Population |
|---|---|---|---|---|---|---|
| At Risk to **Extreme** Wildfire Hazards | Dillon | 161 | $25,561,865 | $15,027,833 | $40,589,698 | 314 |
| | Lima | 3 | $411,421 | $205,711 | $617,132 | 6 |
| | Beaverhead County | 156 | $14,695,981 | $7,644,282 | $22,340,263 | 294 |
| | **Total** | **320** | **$40,669,267** | **$22,877,825** | **$63,547,092** | **614** |
| At Risk to **Very High** Wildfire Hazards | Dillon | 1,108 | $176,791,334 | $91,662,105 | $268,453,439 | 2,166 |
| | Lima | 181 | $13,840,206 | $7,064,863 | $20,905,069 | 352 |
| | Beaverhead County | 1,187 | $235,223,443 | $127,759,260 | $362,982,703 | 2,218 |
| | **Total** | **2,476** | **$425,854,983** | **$226,486,228** | **$652,341,211** | **4,736** |
| At Risk to **High** Wildfire Hazards | Dillon | 45 | $13,241,214 | $6,629,052 | $19,870,266 | 88 |
| | Lima | 2 | $109,480 | $104,275 | $213,755 | 2 |
| | Beaverhead County | 983 | $210,940,005 | $140,969,368 | $351,909,373 | 1,354 |
| | **Total** | **1,030** | **$224,290,699** | **$147,702,695** | **$371,993,394** | **1,444** |

Source: MSDI 2022, MWRA

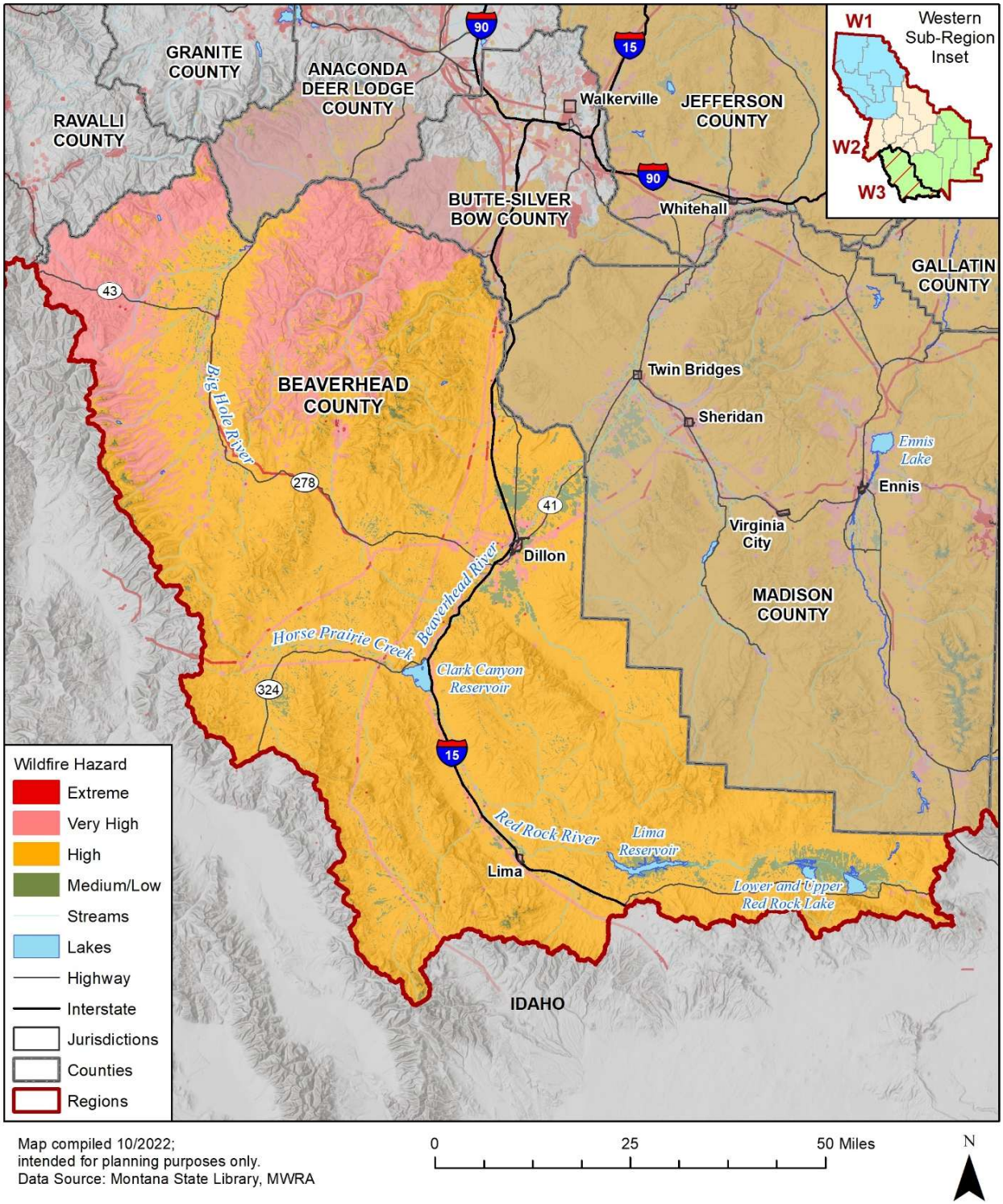
Table A-16 summarizes the potential impact of wildfire on critical facilities and lifelines in Beaverhead County and its associated jurisdictions. The table highlights the type and number of facilities in each jurisdiction in the County in Wildfire risk areas. See Chapter 4 for the methodology of the critical facilities at risk analysis.

**Table A-16 Critical Facilities at Risk to Wildfire Hazards by Jurisdiction, Facility Type, and Risk Rating**

| At Risk Rating | Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Materials | Health & Medical | Safety & Security | Transportation | Total |
|---|---|---|---|---|---|---|---|---|---|
| At Risk to **Extreme** Wildfire Hazards | Dillon | 1 | - | 1 | - | 1 | 5 | - | **8** |
| | Lima | 1 | - | - | - | - | - | - | **1** |
| | Beaverhead County | 8 | 3 | 6 | - | 2 | 4 | 4 | **27** |
| | **Total** | **10** | **3** | **7** | **0** | **3** | **9** | **4** | **36** |
| At Risk to **Very High** Wildfire Hazards | Dillon | 2 | 1 | 4 | - | - | 2 | 4 | **13** |
| | Lima | 1 | - | 1 | - | - | - | 2 | **4** |
| | Beaverhead County | 22 | 11 | 4 | 1 | 1 | 5 | 28 | **72** |
| | **Total** | **25** | **12** | **9** | **1** | **1** | **7** | **34** | **89** |
| At Risk to **High** Wildfire Hazards | Dillon | - | - | 1 | - | - | - | - | **1** |
| | Beaverhead County | 2 | 2 | - | - | - | 1 | 98 | **103** |
| | **Total** | **2** | **2** | **1** | **0** | **0** | **1** | **98** | **104** |
| At Risk to **Medium/Low** Wildfire Hazards | Dillon | 2 | - | 2 | - | - | 4 | 1 | **9** |
| | Lima | - | - | 1 | - | 1 | 4 | - | **6** |
| | Beaverhead County | 4 | 2 | 3 | - | - | 2 | 100 | **111** |
| | **Total** | **6** | **2** | **6** | **0** | **1** | **10** | **101** | **126** |

Source: HIFLD 2022, Montana DES, NBI, MWRA

**Figure A-15 Beaverhead County Wildfire Hazard**



# A.5 Mitigation Capabilities Assessment

As part of the regional plan development, the Region and participating jurisdictions developed a mitigation capability assessment. Capabilities are those plans, policies and procedures that are currently in place that contribute to reducing hazard losses. Combining the risk assessment with the mitigation capability assessment results in "net vulnerability" to disasters and more accurately focuses the goals, objectives, and proposed actions of this plan. The CPT used a two-step approach to conduct this assessment. First, an inventory of common mitigation activities was made using a matrix. The purpose of this effort was to identify policies and programs that were either in place or could be undertaken, if appropriate. Second, the CPT conducted an inventory and review of existing policies, regulations, plans, projects, and programs to determine if they contribute to reducing hazard related losses.

## A.5.1 Regulatory Mitigation Capabilities

Table A-17 lists planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the Western Region and each participating jurisdiction.

**Table A-17 Beaverhead County and Jurisdictions Regulatory Mitigation Capabilities**

| Plans and Regulations | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| Building Codes | No | No | No |
| Building Codes Year | N/A | N/A | N/A |
| BCEGS Rating | No | No | No |
| Capital Improvements Program (CIP) or Plan | Yes | Yes | No |
| Community Rating System (CRS) | No | No | No |
| Community Wildfire Protection Plan (CWPP) | Yes (Updated in 2010) | Yes (Updated in 2010) | Yes (Updated in 2010) |
| Comprehensive, Master, or General Plan | No | Yes | No |
| Economic Development Plan | No | No | No |
| Elevation Certificates | Yes | Yes | Yes |
| Emergency Operations Plan | Yes | Yes | Yes |
| Erosion/Sediment Control Program | No | No | No |
| Floodplain Management Plan | Yes | Yes | Yes |
| Flood Insurance Study | Yes | Yes | Yes |
| Growth Management Ordinance | Yes | Yes | No |
| Hazard-Specific Ordinance or Plan (Floodplain, Steep Slope, Wildfire) | Yes (Floodplain ordinance has been adopted) | Yes (Floodplain ordinance has been adopted) | Yes (Floodplain ordinance has been adopted) |
| National Flood Insurance Program (NFIP) | Yes | Yes | Yes |

| Plans and Regulations | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| Site Plan Review Requirements | Yes | Yes | Yes |
| Stormwater Program, Plan, or Ordinance | No | No | No |
| Zoning Code or Ordinance | No | Yes | No |
| Other? | N/A | N/A | N/A |

### Discussion on Existing Regulatory Mitigation Capabilities

**Beaverhead County**: The CPT noted that Beaverhead County has no specific ordinances pertaining to land use and development around hazards, except floodplains. Typically, properties require subdivision approvals to be developed. The planning department is responsible for giving guidance and approvals of subdivisions.

Currently, there is no building code enforcement in Beaverhead County, except for commercial buildings, which fall under State regulations. Beaverhead County has plans of adopting a Development Permit that would be required to be approved before any construction begins. This, if approved, could be the first step to implementing building code enforcement.

**City of Dillon:** The City of Dillon has no specific ordinances pertaining to land use and development in and around hazards other than flood plains. Development in the City of Dillon requires zoning compliance approval. In addition, there is currently no building code enforcement in the City of Dillon other than through the State of Montana for commercial buildings. The City of Dillon is currently conducting to research to possibly adopt building code enforcement.

**Town of Lima:** The Town of Lima has no specific ordinances pertaining to land use and development in and around hazards other than flood plains. Currently, there is no building code enforcement in the Town of Lima other than through the State of Montana for commercial buildings.

### Discussion on NFIP Participation and Compliance

**Beaverhead County**: The floodplain administrator for Beaverhead County is appointed and is the responsibility of the Beaverhead County Planner. The administrator oversees regulations on substantial damage and improvement of structures within the unincorporated County. Any new construction within a designated floodplain in Beaverhead County requires a flood plain permit. Substantial damage is defined as damage where restoration costs are 50% or more of the structure's pre-damage market value. Substantial improvement involves repairs or enhancements where costs are 50% or more of the market value before the work starts or before damage if being restored. This definition excludes projects solely for code compliance for safety or alterations to historic structures. All substantial damage and improvement projects in the unincorporated County must comply with the County's most recent floodplain regulations. The County's Floodplain Hazard Management Regulations were most recently updated in November 2023, following their flood insurance rate map (FIRM) update in August of the same year.

Beaverhead County and its municipalities do not have any properties classified under the National Flood Insurance Program (NFIP) as Repetitive Loss (RL) or Severe Repetitive Loss (SRL).

**City of Dillon:** In the City of Dillon, the floodplain administrator is appointed and is the responsibility of the Director of Operations. The administrator oversees regulations on substantial damage and improvement of structures within the City's jurisdiction, with definitions in Dillon aligning with those of the County. All

substantial damage and improvement projects in the City must comply with the City's most recent floodplain regulations, updated following their FIRM update in August 2023.

**Town of Lima**: Floodplain permitting and administration in the Town of Lima is handled jointly by the Lima Town Clerk and the Beaverhead County Floodplain Administrator. Both administrators oversee regulations on substantial damage and improvement of structures within the Town, with definitions in Lima matching those of the County. All substantial damage and improvement projects in the Town must comply with Lima's most recent floodplain regulations, updated following their FIRM update in August 2023.

Each jurisdiction intends to continue complying with NFIP requirements. However, they face challenges with developers starting building projects before permitting is completed and a lack of enforcement.

## A.5.2 Administrative and Technical Mitigation Capabilities

Table A-18 identifies the County and participating jurisdictions' personnel responsible for activities related to mitigation and loss prevention in Beaverhead County.

**Table A-18 Beaverhead County Jurisdictions Administrative/Technical Mitigation Capabilities**

| Administrative and Technical | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| Emergency Manager | Yes | Yes | No |
| Floodplain Administrator/ Position/ Department | Yes | Yes | Yes |
| Community Planning: | | | |
| - Planner/Engineer (Land Development) | Yes | Yes | No |
| - Planner/Engineer/ Scientist (Natural Hazards) | Yes | No | No |
| - Engineer/Professional (Construction) | No | No | No |
| - Resiliency Planner | No | No | No |
| - Transportation Planner | No | No | No |
| Full-Time Building Official | No | No | No |
| GIS Specialist and Capability | Yes | No | No |
| Grant Manager, Writer, or Specialist | No | No | No |
| Housing Authority | No | No | No |
| Warning Systems: (list the hazards each system is used for) | | | |
| - Sirens | Yes | Yes | No |
| - Reverse 911 | No | No | No |
| - IPAWS/Wireless Emergency Alerts (WEA) | No | No | No |
| - Opt-In Notifications (CodeRed, Everbridge, etc.) | Yes | Yes | Yes |
| - Other system | N/A | N/A | N/A |
| Other? | | | |

## A.5.3 Financial Capabilities

Table A-19 identifies the County and participating jurisdictions' financial tools or resources that the jurisdictions have access or are eligible to use and could potentially be used to help fund mitigation activities.

**Table A-19 Beaverhead County Jurisdictions Financial Capabilities**

| Financial Capabilities | Beaverhead County | City of Dillion | Town of Lima |
|---|---|---|---|
| Ability to fund projects through Capital Improvements funding | Yes | Yes | Yes |
| Ability to incur debt through general obligation bonds | Yes | Yes | Yes |
| Ability to incur debt through private activities | No | No | No |
| Ability to incur debt through special tax bonds | Yes | Yes | Yes |
| Authority to levy taxes for a specific purpose with voter approval | Yes | Yes | Yes |
| Authority to withhold spending in hazard prone areas | No | No | No |
| Community Development Block Grants | Yes | Yes | Yes |
| FEMA Hazard Mitigation Assistance grants | Yes | Yes | Yes |
| FEMA Public Assistance funds | Yes | Yes | Yes |
| Stormwater Service Fees | No | No | No |
| System Development Fee | No | No | No |
| Utility fees (water, sewer, gas, electric, etc.) | Yes | Yes | Yes |
| Other? | N/A | N/A | N/A |

The CPT mentioned that there is some awareness amongst certain people regarding changes in community priorities related to hazard mitigation, such as an increased emphasis related to a hazard event, pursuit of grant funding, etc.

In 2006, the Blacktail Creek in the City of Dillon was reconstructed for flood mitigation. The project was funded by FEMA.

In the past, there has been a hazard fire fuels mitigation program to reduce fuels in the wildland urban interface. The program was funded with different sources of fundings, to include State and Federal, and provided a cost match to the landowner.

### FEMA and Other Grant Funding Leveraged for Hazard Mitigation

Funding for the proposed mitigation projects may come from a variety of sources. Below is a list of funding possibilities. This list is not tied directly to each proposed project; however, these programs could work for specific projects or multiple projects.

- FEMA Hazard Mitigation Assistance Grants including:
    - Building Resilient Infrastructure and Communities (BRIC)
    - Flood Mitigation Assistance Program (FMA).
    - Hazard Mitigation Grant Program (HMGP).
- US Army Corp of Engineers funding
- USDA Environmental Quality Incentive Program.
- USDA Conservation Reserve and Conservation Reserve Enhancement Program.
- USDA Small Watersheds (NRCS).

There are many more potential funding opportunities available to the municipalities and county. Funding research will be done during the scoping process for each project. New funding mechanisms may be present that were not before. Beaverhead County and its jurisdictions have participated in several of these hazard mitigation assistance projects, summarized in the Table A-20 below.

**Table A-20 Beaverhead County Hazard Mitigation Assistance Projects**

| Program | Date Approved | Project Type | Status | Location |
|---|---|---|---|---|
| PDM | 2006-08-25 | 405.1: Other Minor Flood Control | Closed | Beaverhead |
| HMGP | 2018-02-27 | "205.4: Non-Structural Retrofitting/Rehabilitating Public Structures - Seismic; | Closed | Beaverhead |
| HMGP | 2013-05-21 | 205.6: Structural Retrofitting/Rehabilitating Public Structures - Seismic" | Closed | Beaverhead |
| HMGP | 2015-06-09 | "205.4: Non-Structural Retrofitting/Rehabilitating Public Structures - Seismic; | Closed | Beaverhead |

Source: FEMA Opendata

## A.5.4 Education and Outreach Capabilities

Table A-21 identifies the education and outreach programs in place at the County and participating jurisdictions are or could be used to help promote mitigation activities.

**Table A-21 Beaverhead County Education and Outreach Capabilities**

| Education & Outreach Programs | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| Ongoing public education programs (fire safety, responsible water use, household preparedness, etc) | No | No | No |
| Local citizen groups that communicate hazard risks | No | No | No |
| Firewise or other fire mitigation program | No (The County used to participate in Firewise) | No (The County used to participate in Firewise) | No |
| National Weather Service StormReady | Yes | Yes | No |

As mentioned previously, the CPT mentioned that there is some awareness amongst certain people regarding changes in community priorities related to hazard mitigation. Flood mitigation and hazard fire fuels mitigation programs have been carried out by the County and the City of Dillon.

## A.5.5 Non-Governmental Organizations (NGOs) and Mitigation Partnerships

Table A-22 shows the local chapters partnered with the County and participating jurisdictions.

**Table A-22 Beaverhead County Non-Governmental Organizations (NGOs)**

| Non-Governmental Organizations (NGOs) | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| American Red Cross | Yes | Yes | No |
| Chamber of Commerce | Yes | Yes | No |
| Community Organizations (Lions, Kiwanis, etc.) | Yes | Yes | No |
| Environmental Groups | No | No | No |

| Non-Governmental Organizations (NGOs) | Beaverhead County | City of Dillon | Town of Lima |
|---|---|---|---|
| Homeowner Associations | Yes | Yes | No |
| Neighborhood Associations | No | No | No |
| Salvation Army | No | No | No |
| Veterans Groups | Yes (VFW and American Legion) | Yes (VFW and American Legion) | No |
| Other? | | | |

### A.5.6 Opportunities for Enhancement

The CPT mentioned that there are possibly some opportunities to provide further education and outreach to the public by utilizing certain volunteer groups, e.g. watershed and conservation groups. However, the staffing and funding by local governments to dedicate is extremely limited. Based on the capabilities assessment, Beaverhead County has several existing mechanisms in place that already help mitigate hazards. There are also opportunities for the County to expand or improve on their policies, programs and fiscal capabilities and further protect the community. Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and DHSEM. Additional training opportunities will help to inform County and local government staff members on how to best integrate hazard information and mitigation projects into their departments. Continuing to train staff on mitigation and the hazards that pose a risk to Beaverhead County will lead to more informed staff members who can better communicate this information to the public.

Another opportunity for enhancement is to increase public education and outreach on hazards. Creating ongoing public education programs can increase the community's preparedness for hazard events. Improved cross-jurisdictional communication on evacuation and awareness to mitigate life safety impacts during dam incidents, floods, or wildfires including the development of brochures and using existing communication capabilities through social media or other media. Other specific opportunities for improvement include:

- Beaverhead County:
  - Consider adopting building codes and/or a zoning ordinance
  - Consider the preparation of an up-to-date comprehensive, master, or general plan
  - Update the CWPP
  - Consider joining FEMA Community Rating System (CRS) to lower the cost of flood insurance
  - Consider adopting a Hazard Specific Ordinance or Plan
  - Additional partnerships with area agencies to further develop hazard mitigation programs.
- City of Dillon:
  - Consider adopting building codes and/or a zoning ordinance
  - Update the CWPP
  - Consider joining FEMA Community Rating System (CRS) to lower the cost of flood insurance
  - Consider adopting a Hazard Specific Ordinance or Plan
  - Additional partnerships with area agencies to further develop hazard mitigation programs.
- Town of Lima:

- Consider adopting building codes and/or a zoning ordinance
- Update the CWPP
- Consider joining FEMA Community Rating System (CRS) to lower the cost of flood insurance
- Consider adopting a Hazard Specific Ordinance or Plan
- Consider the preparation of an up-to-date comprehensive, master, or general plan
- Consider the preparation of a growth management ordinance
- Additional partnerships with area agencies to further develop hazard mitigation programs.

## A.6 Mitigation Strategy

This section describes the mitigation strategy and mitigation action plan for Beaverhead County. See Chapter 5 of the base plan for more details on the process used to develop the mitigation strategy.

### A.6.1 Goals

During the creation of the 2023 Regional Plan, the counties in the Montana Western Region decided to collaborate and develop a set of new, uniform goals, which were adopted by all counties in the Region and move away from hazard-specific goals. The adopted goals are as follows:

- Goal 1: Reduce impacts to people, property, the environment, and the economy from hazards.
- Goal 2: Protect community lifelines and critical infrastructure to ensure the continuity of essential services.
- Goal 3: Increase public awareness and participation in hazard mitigation.
- Goal 4: Sustain and enhance jurisdictional capabilities to enact mitigation activities.
- Goal 5: Integrate hazard mitigation into other plans, processes, and regulations.
- Goal 6: Promote regional cooperation and leverage partnerships in mitigation solutions where possible.

The 2017 Beaverhead County Pre-Disaster Mitigation Plan outlined the following goals:

- Goal 1: Reduce risks from all hazards through comprehensive mitigation activities
- Goal 2: Reduce impacts from flooding
- Goal 3: Minimize risk of wildfire at the urban interface
- Goal 4: Reduce risk of hazardous material incidents
- Goal 5: Reduce risk of disease, environmental hazards, and terrorist acts
- Goal 6: Reduce impact of earthquakes
- Goal 7: Reduce impact of countywide weather hazards such as drought and winter weather
- Goal 8: Minimize impact of aircraft incidents
- Goal 9: Continue to emphasize preparedness, response, and recovery activities in all types of emergency management planning.

### A.6.2 Progress on Previous Actions

During the 2023 planning process, the Beaverhead County Planning Team reviewed all the mitigation actions from the 2017 plan. As shown in Table A-23, of the 42 actions in the previous plan, five have been completed.

**Table A-23 Completed and Deleted Actions**

| 2017 ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Status |
|---|---|---|---|---|
| 1.1.6 | Research, expanding warning system for the City of Dillon and the campus of the University of Montana – Western to other areas in the county (Lima, Jackson, Wisdom, and Wise River). | Flood, Hazardous Material Release, Severe Weather, Terrorism and Civil Unrest, Urban Fire, Wildfire | City of Dillon | Completed. early warning system was funded under Homeland Security Grant and was installed in 2017. |
| 1.2.3 | Install isolation valve to main line to reduce the chance of losing the entire system. Potable water/fire water. Create and maintain an annual trial run of Beaverhead County Emergency Communications Plan | Disease and Environmental Contamination, Drought, Urban Fire, Wildfire, Existing Development, Future Development | Beaverhead County<br>City of Dillon<br>Town of Lima | Completed. Municipal water transit lines have been upgraded. |
| 1.2.4 | Research and purchase/upgrade communication equipment. Research what resources are needed for use in emergency situations. Educate existing dispatch with resources available at secondary dispatch center. | Drought, Earthquake, Flood, Severe Weather, Terrorism and Civil Unrest, Urban Fire, Utility and Energy Failure | Beaverhead County<br>City of Dillon | Completed. Dispatch center has been fully upgraded, which includes a remote dispatch center. Remote repeaters have been upgraded. Upgrades and training must continue. County has established a 911 Communications committee to address these issues. |
| 1.3.3 | Update the countywide growth policy to encourage growth in low hazard areas and allow for the consideration of high hazard areas during subdivision reviews | Aircraft Accident, Drought, Earthquake, Flood, Hazardous Material Release, Severe Weather, Terrorism and Civil Unrest, Transportation Accident, Urban Fire, Utility and Energy Failure, Wildfire, Future Development | Beaverhead County<br>City of Dillon<br>Town of Lima | Completed. Completed and adopted in 2022 |
| 8.1.3 | Purchase and install equipment to allow for instrument approaches to the Dillon airport. | Aircraft Accident | Beaverhead County<br>City of Dillon | Completed. Completed by airport |

### A.6.3 NFIP Continued Compliance.

Also important to reducing losses to future development is continued compliance with the NFIP. All the jurisdictions will continue to make every effort to remain in good standing with the program. This includes continuing to comply with the NFIP regarding adopting floodplain maps and implementing, maintaining, and updating floodplain ordinances. See Section 5.4.2 in the base plan for more discussion on NFIP compliance.

### A.6.4 Mitigation Action Plan

As a part of the 2023 regional planning process, the CPT developed an updated list of hazard mitigation actions or projects specific to Beaverhead County and its jurisdictions. The process used to identify, develop, and prioritize these actions is described in Chapter 5 of the base plan. Beaverhead County has seven uncompleted mitigation actions carried over from the previous plan and has added an additional two new actions. There are 18 mitigation actions that are being implemented annually and 15 mitigation actions that are in progress.

Table A-24 lists the 2023 Mitigation Action Plan for Beaverhead County and its participating jurisdictions. The CPT identified and prioritized the following mitigation actions based on the risk assessment and goals, and objectives. It is grouped by hazard(s) mitigated). Background information as well as information on how the action will be implemented and administered, such as ideas for implementation, responsible office (indicated with **bold** font), partners, potential funding, estimated cost, and timeline also are described. Per the DMA requirement, actions have been identified that address reducing losses to existing development as well as future development.

The Cost Estimate column describes the estimated project costs using the following categories:

- Little to no cost
- Low: Less than $10,000
- Moderate: $10,000-$100,000
- High: $100,000-$1,000,000
- Very High: More than $1,000,000

The Timeline column describes the estimated time of completion for each project using the following categories:

- Short Term: 1-2 years
- Medium Term: 3-5 years
- Long Term: 5+ years
- Ongoing: action is implemented every year

The Status/Implementation Notes column describes the progress made on the actions so far using the following categories:

- Not Started: project is carried over from the previous Beaverhead County Plan; little to no work has been completed.
- In Progress: project is carried over from the previous Beaverhead County Plan; work has begun on the project and is proceeding.
- Annual: project is carried over from the previous Beaverhead County Plan and is implemented every year on an ongoing basis.
- New in 2023: The action is new to this plan update; little to no work has been completed.

Table A-24 below lists the mitigation actions for each participating jurisdiction in Beaverhead County. All jurisdictions have developed mitigation actions for each identified hazard in the HMP.

**Table A-24 Mitigation Actions by Hazard and Jurisdiction Summary**

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Initiate or continue participation in the NWS's Storm Ready Program to ensure community readiness for severe weather. | Flooding, Summer Weather, Winter Weather, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **DES**; County Commissioners, City/Town Council, NWS | Low | Local General Funds, Staff Time | Ongoing | High | Annual Implementation. There is easier access and more awareness to severe weather info with modern technology. Training will continue. |
| 2 | Educate, promote, and provide NOAA Weather Radios to the public at a discounted price. | Flooding, Summer Weather, Winter Weather, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **DES**; NWS, radio vendors | Moderate | Local General Funds Staff Time | Short Term | High | Annual Implementation. Public has easier access to weather info via smart phone apps |
| 3 | Purchase and install early-warning systems for dam failure at the Clark Canyon and Lima Dams. | Flooding | Beaverhead County, City of Dillon, Town of Lima | **DES**, Montana DNRC, USBR; Beaverhead County Red Rock River Water and/or Sewer District, City/Town Council | High | HMGP, BRIC, USACE authorities, Silver Jackets | Short Term | High | Not Started. There are protocols in place for personnel to check dams in the event of flood, earthquake or anything that would jeopardize safety of dams. |
| 4 | Purchase and install an automated weather observation station (with satellite communications) in Wisdom that will allow forecasters to issue more timely warnings for the area. | Drought, Flooding, Summer Weather, Winter Weather | Beaverhead County | **NWS**, DES; | Very High | HMGP, BRIC, USACE authorities, Silver Jackets | Medium Term | Medium | Annual Implementation. Public has easier access to weather info via smart phone apps |
| 5 | Research, purchase, and install a warning system for the Town of Lima and the I-90 rest area. Research expansion of Dillon system for area. | Flooding, Hazmat, Summer Weather, Winter Weather, Human Conflict, Wildfire | Town of Lima | **Town Council,** DES; Montana Dept. of Transportation (MDT), NWS | Very High | HMGP, BRIC, USACE authorities, Silver Jackets | Short Term | High | Not started. Siren system in Dillon can be expanded to service Lima. Town of Lima is doing further research. |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Upgrade and procure two-way radios and satellite phones in critical areas. Education regarding use of emergency communications. Create and maintain an annual trial run of Beaverhead County Emergency Communications Plan. | Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, DES; Search and Rescue, University of Montana-Western | Low | Local General Funds, Staff Time | Medium Term | High | Annual Implementation. Beaverhead County has completed many upgrades to its mobile radio system and dispatching center. This has been funded by HSG and internal sources. This includes upgraded repeaters, new repeaters, backup power. |
| 7 | Purchase and install backup power systems for the University of Montana – Western, all schools, other critical infrastructure, emergency shelter systems, and all communication centers. Install pigtails (electrical wiring) and two-way switches at all fire stations and emergency response units for generators | Multi: Cyber-Attack, Dam Failure, Earthquake, Flooding, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Radio Station Managers; DES, University of Montana-Western | High | HMGP, BRIC, | Short Term | High | Annual Implementation. A new Backup power system will be installed for the Beaverhead County Courthouse in summer of 2023. Backup power has been installed on one critical remote radio repeater and is planned on others. Currently working on systems for shelter sites. |
| 8 | Provide assistance with purchasing and installing equipment needed to make the campus completely self-sustainable to include communications | Multi: Cyber-Attack, Dam Failure, Earthquake, Flooding, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon | **County Commissioners**, City Council, DES; University of Montana-Western | Very High | HMGP, BRIC, | Medium Term | High | In Progress. backup power system that runs critical loads such as heat has been upgraded. County communication system helps with self-sufficiency. |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Purchase and install radio repeaters to increase the range of the existing radio network. | Multi: Cyber-Attack, Dam Failure, Earthquake, Flooding, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, DES; Search and Rescue, University of Montana-Western | High | HMGP, BRIC, | Medium Term | High | In Progress. radio repeaters and some radios have been upgraded. One new radio repeater in remote location has been constructed. 2nd repeater in remote area will be added in 2023 |
| 10 | Update countywide subdivision regulations to adopt higher minimum standards for subdivisions that improve their all-hazard disaster resistance RSI-2703. Also include Firewise information in the regulations by: Conducting wildfire home site evaluations and homeowner and landowner education, including defensible space workshops, throughout the county. Encouraging homeowners and landowners in the WUI to use fire-resistant materials and to create defensible space from wildfires around their homes and outbuildings using Firewise principles. | Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Planning Department, Fire Department; | Little to no cost | Local General Funds, Staff Time | Short Term | High | In Progress. County Growth Policy had to be completed before subdivision regs can be updated. This was completed in 2022. |
| 11 | Encourage all jurisdictions in the county to adopt and | Earthquake, Flooding, Summer Weather, Winter Weather, Human | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Code Enforcement; | Little to no cost | Local General Funds, Staff Time | Medium Term | Medium | Annual Implementation. County has made progress in moving towards adopting building permits |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| | enforce the state's building codes. | Conflict, Wildfire, Volcanic Ashfall | | | | | | | and possibly building code enforcement. If it is adopted, it must be first recognized in the Growth Policy, which has been completed. |
| 12 | Use conservation easements in high hazard areas, such as flood and wildfire areas, to serve a dual purpose, to keep development from high hazard areas, and to conserve wildland areas. | Flooding, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Planning Department; **Private Conservation Entities** | Moderate | HMGP, BRIC, USDA Community Wildfire Defense Grant (CWDG), Silver Jackets, USACE authorities | Medium Term | Medium | Not started. County has no control over where conservation easements are approved. |
| 13 | Provide outreach and informational materials to the public regarding mitigation activities that they can undertake at home and at work. Continue to encourage the thought process about how to mitigate risks and vulnerabilities to our communities. | Multi: Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **DES**; Schools, Fire Departments, City/Town Council | Low | Local General Funds, Staff Time | Ongoing | High | Annual Implementation. County website has been updated with some information |
| 14 | Educate builders on construction methods, materials, siting, and other items that will make structures more disaster-resistant to all hazards. | Earthquake, Flooding, Summer Weather, Winter Weather, Volcanic Ashfall, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Planning Departments; DES, Services, Builders' Associations | Moderate | Local General Funds, Staff Time | Short Term | High | Annual Implementation. Much of this is done through subdivision process, floodplain, and wastewater treatment permitting. |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| 15 | Replace or add culverts or make other drainage improvements to flood-prone areas. Example 1: On Blacktail Deer Creek, install a diversion control structure in the creek channel, remove the permanent earthen structure that inhibits natural winter flows, and elevate the Buster Brown Road Bridge over Blacktail Deer Creek. Example 2: Upgrade the bridge over Junction Creek at Slater Street in Lima and improve the bank where the overflow channel meets the creek to reduce future residential flooding, Maintain culvert and channel capacities by keeping them free of debris. Research the need for channel restoration in the upper section of Blacktail Creek. | Flooding | Beaverhead County, City of Dillon, Town of Lima | **Road Departments,** MDT; | High | HMGP, BRIC, | Ongoing | High | In Progress. County Road department has replaced some bridges and culverts that are prone to cause flooding. Currently looking at areas to do stream restoration to prevent flooding due to ice jamming. |
| 16 | In unmapped areas, implement floodplain studies and mapping of streams with flood potential. | Flooding | Beaverhead County, City of Dillon, Town of Lima | **County Floodplain Administrator,** County Commissioners, City/Town Council, FEMA | Low | USACE authorities, Silver Jackets | Short Term | High | In Progress. DNRC has compiled information for new and extended flood mapping in County. It is awaiting final adoption from FEMA |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| 17 | Educate property owners on the availability and importance of flood insurance. | Flooding | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Floodplain Administrators; DES | Little to no cost | Local General Funds, Staff Time | Medium Term | Medium | In Progress. Flood insurance is required in FEMA flood areas and optional in others. Most homeowners do not buy insurance unless required. |
| 18 | Install stream gages with satellite communications in several unmonitored streams in the county. | Flooding | Beaverhead County | **County Commissioners**, City/Town Council, DES, USGS, NWS | Low | USACE authorities, Silver Jackets | Medium Term | Medium | In Progress. This has been discussed with applicable agencies. |
| 19 | Consider acquiring, relocating, or elevating flood-prone structures | Flooding | Beaverhead County, City of Dillon, Town of Lima | **Floodplain Administrators,** DES; | Very High | HMGP, BRIC, USACE authorities, Silver Jackets | Long Term | Low | In Progress. There are not many structures in County that this would apply too. |
| 20 | Continue to enforce flood ordinances and participate in the NFIP. | Flooding | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Floodplain Administrators; | Little to no cost | Local General Funds, Staff Time | Ongoing | High | Annual Implementation. Flood ordinances and best management practices will be continued to be enforced. |
| 21 | Update the Community Wildfire Protection Plan. | Wildfire | Beaverhead County | **Fire Departments;** DES | Low | HMGP, BRIC, USDA Community Wildfire Defense Grant (CWDG) | Ongoing | High | In Progress. Currently seeking funding for updates. |
| 22 | Conduct wildfire home site evaluations and homeowner and landowner education, including defensible space workshops, throughout the county. Encourage homeowners and landowners in the WUI to use fire-resistant materials and create a defensible | Wildfire | Beaverhead County | **Fire Departments;** DES, Homeowners Associations, Landowners | Moderate | HMGP, BRIC, USDA Community Wildfire Defense Grant (CWDG) | Ongoing | Medium | Annual Implementation. Educations continues with info on website, by local fire departments, fire warden and when new construction is permitted. It is also addressed during subdivision process. |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| | space from wildfires around their homes and outbuildings using Firewise principles. Continue to plan for, support, educate, and train residents on fire prevention. | | | | | | | | |
| 23 | Encourage a variety of treatments to reduce hazardous fuels, particularly in the WUI, including but not limited to vegetation treatments, prescribed burning, and grazing. Work with state, federal, and private agencies to focus treatment efforts in the most vulnerable areas, including electric infrastructure. Educate the public on wildfire mitigation grant funding that is available for individual properties. | Wildfire | Beaverhead County | **Fire Department;** DES, Homeowners Associations, Landowners, Montana DNRC, USFS, BLM, Rocky Mountain Elk Foundation, Beaverhead County Conservation District, Beaverhead County Weed Department | Moderate | HMGP, BRIC, USDA Community Wildfire Defense Grant (CWDG) | Ongoing | Medium | In Progress. There has been some extensive fuels reduction work completed in some developed areas of County on private and some State Lands. Most of the problems are on Federal grounds. This has been addressed but not completed. |
| 24 | Encourage the community in the WUI to create an individual Wildfire Protection Plan. Educate the community about wildfire risk. | Wildfire | Beaverhead County | **Fire Departments;** DES, Homeowners Associations, Landowners | Low | HMGP, BRIC, USDA Community Wildfire Defense Grant (CWDG) | Short Term | High | In Progress. Some outreach completed via DNRC and rural fire departments. Very difficult to find funding. Plan is to include under County Wide Plan. |
| 25 | Training for hazardous materials awareness, operations, technician level, | Hazmat | Beaverhead County, City of Dillon, Town of Lima | **DES,** Fire Departments; Hazardous Material Transporters and Facility Mangers | Low | Local General Funds, Staff Time | Medium Term | High | Annual Implementation. There is continued training for hazmat via fire |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| | and higher levels of training. | | | | | | | | departments and ambulance services, also expanding to law enforcement. Dillon fire chief and DES coordination working on Operations level and other specialized trainings. |
| 26 | Study the amount, type, and frequency of hazardous materials that pass through Beaverhead County, Dillon, and Lima. Continue building partnerships through the LEPC. | Hazmat | Beaverhead County, City of Dillon, Town of Lima | **DES**, Fire Departments; Hazardous Material Transporters and Facility Mangers | Low | Local General Funds, Staff Time | Medium Term | Medium | Annual Implementation. Some, non-formal, awareness level observation is taking place, but no formal assessment has been completed. |
| 27 | Improve security measures at fixed facilities that house hazardous materials. | Hazmat, Human Conflict | Beaverhead County, City of Dillon, Town of Lima | **DES,** Fire Departments; Hazardous Material Transporters and Facility Mangers | Low | Local General Funds, Staff Time | Long Term | Low | Not Started. security is responsibility of owners, difficult for county to impose. |
| 28 | Continue coordination between public health agencies, healthcare providers, and other emergency responders. Continue to focus on public health issues and mitigation in terrorism planning. Increase surveillance planning with the hospital and medical community. Include mitigation ideas in after-action reports. Update | Communicable Disease | Beaverhead County, City of Dillon, Town of Lima | **Health Department**; Healthcare Providers, Hospital, DES | Little to no cost | Local General Funds, Staff Time | Ongoing | Low | Annual Implementation. Continued meetings with hospital and public health in LEPC |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| | Emergency Preparedness Plan. | | | | | | | | |
| 29 | Work with local officials to assess the need for Active Shooter Training. Attain effective and regular training for the proper local agencies. | Communicable Disease, Human Conflict | Beaverhead County, City of Dillon, Town of Lima | **DES**, Law Enforcement, Dept. of Homeland Security; Local Hospital, All Schools, Private Contractors | Low | Local General Funds, Staff Time | Medium Term | High | Annual Implementation. Some active shooter training has taken place with County and College, Police Dept. Plan is to do larger trainings in future. |
| 30 | Update and continue to enforce environmental laws, rules, and regulations to protect air, soil, and water. | Communicable Disease, Human Conflict, Hazmat | Beaverhead County, City of Dillon, Town of Lima | **Health Department;** County Commissioners, City/Town Council, Environmental/Public Health | Low | Local General Funds, Staff Time | Ongoing | Low | Annual Implementation. This is done with DEQ, Subdivision rules, EPA guidance, etc. |
| 31 | Continue mitigation planning for weapons of mass destruction and terrorist events. Work with energy companies to identify areas of risk and vulnerability and develop strategies to mitigate shortfalls. Identify areas of risk for local water supply. Include mitigation ideas in after-action reports. | Human Conflict | Beaverhead County, City of Dillon, Town of Lima | **DES**, Law Enforcement; Energy Companies, Environmental/Public Health, City/Town Council | Little to no cost | Local General Funds, Staff Time | Ongoing | Low | Annual Implementation. Obvious new threats to infrastructure with power substations being vandalized. It is difficult to get private power companies to spend money on security. City of Dillon and Lima water systems should be assessed. |
| 32 | Work with public schools to enhance education and training on earthquakes. | Earthquake | Beaverhead County, City of Dillon, Town of Lima | **School Administrators**, DES; City/Town Council | Low | Local General Funds, Staff Time | Short Term | High | Annual Implementation. More education and training need to take place. Schools need to be more involved in LEPC. |
| 33 | Conduct earthquake risk assessments at each public school. Perform simple | Earthquake | Beaverhead County, City of Dillon, Town of Lima | **School Administrators**, DES; City/Town Council | Moderate | HMGP, BRIC, | Short Term | High | Not Started. Discussions have taken place, but no action that I am aware of. |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| | mitigation activities, such as filming windows and securing equipment | | | | | | | | |
| 34 | Continue to mitigate the drought hazard through public education and awareness. Develop aerial photographs and GIS mapping of irrigation areas to determine accurate irrigation acres and areas. Investigate new technology for irrigation use in low water years. | Drought | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Water Users' Associations, Extension Office | Moderate | Local General Funds, HMGP, BRIC, | Medium Term | Medium | In Progress. County continues to host Drought Task Force meetings with National Weather Service. Plan is to develop water conservation info for cities, towns and rural areas. |
| 35 | Create and update Drought Management Plans for all of the watersheds Develop relationships with locals to assist in targeting conservation for irrigators and fishing. | Drought | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Council, Water Users' Associations, Extension Office, Watershed Groups | Low | Local General Funds, Staff Time | Medium Term | Medium | In Progress. Discussion has taken place with City of Dillon, Town of Lima and County about a public information campaign on water conservation. |
| 36 | Create and update state adopted watershed restoration plans. Develop complete stream and river restoration projects for wetlands, decrease in water temperature, runoff storage, and sediment reduction. Investigate new technology for irrigation use in low water years | Drought, Flooding | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners,** City/Town Council, Water Users' Associations, Extension Office, Watershed Groups | Low | Local General Funds, Staff Time | Medium Term | Medium | In Progress. This can go hand in hand with drought management; however, this is more the responsibility of applicable land management agencies, such as FWP and DNRC. County is looking at a few areas for stream restoration to mitigate ice jamming, which if completed, would serve multiple functions. |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| 37 | Reduce the pole spans to strengthen the electric infrastructure. Bury electric lines. | Multi: Cyber-Attack, Dam Failure, Earthquake, Flooding, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Volcanic Ash, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners,** City/Town Council, DES, Electric Companies | Very High | HMGP, BRIC, | Short Term | High | Not Started. Difficult to get power companies to rebuild infrastructure. Most new subdivisions have buried powerlines. |
| 38 | Install snow fences (living or artificial) along critical roadways that are prone to drifting snow and strong winds | Drought, Winter Weather | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners,** City/Town Council, DES, Road Departments, MDT | Moderate | HMGP, BRIC, | Medium Term | Medium | Not Started. Has been some discussion, but no action. |
| 39 | Education for emergency incidents that occur at the local airport | Transportation Accident, Hazmat, Human Conflict | Beaverhead County, City of Dillon | **County Commissioners,** City Council, Airport Manager; | Little to no cost | Local General Funds, Staff Time | Long Term | Medium | Annual Implementation. Discussions and trainings have taken place and continue. |
| 40 | Improve the security at the Dillon airport. | Transportation Accidents | Beaverhead County, City of Dillon | **County Commissioners**, City Council, Airport Manager; | Moderate | Local General Funds, Staff Time | Long Term | Low | In Progress. There is personnel living at airport that helps with security. May need new entrance gates. |
| 41 | Water Conservation Plan. Develop county-wide water conservation plan to include Lima and Dillon. | Drought, Human Conflict, Wildfire | Beaverhead County, City of Dillon, Town of Lima | **County Commissioners**, City/Town Councils, Water Users' Associations, Extension Office, Watershed Groups | Low | Local General Funds, Staff Time | Short Term | High | New in 2023 |
| 42 | Water Conservation for Fire Protection. Water conservation (and/or restrictions) during summer to all for max water availability for fire protection water reservoir can be lowered due to high | Drought, Wildfire | Town of Lima | **Town of Lima Administration**, Town Council | Low | Local General Funds, Staff Time | Short Term | Medium | New in 2023 |

| ID | Action Name & Description | Hazard(s) Mitigated | Jurisdiction | Lead Agency and Partners | Cost Estimate | Potential Funding | Timeline | Priority | Status/ Implementation Notes |
|---|---|---|---|---|---|---|---|---|---|
| | water usage which would prevent fire dept from having the max amount of water in case of a fire emergency | | | | | | | | |

# A.7 Plan Implementation and Maintenance

Moving forward the Beaverhead County CPT will use the mitigation action table in the previous section to track progress on implementation of each project. Implementation of the plan overall is discussed in Chapter 6 of the base plan.

## A.7.1 Incorporation into Existing Planning Mechanisms

The CPT noted that as Beaverhead County does not have many of the usual planning mechanisms such as comprehensive plans, comprehensive municipal codes, etc., the County's past Pre-Disaster Mitigation Plan mostly gets utilized in the Subdivision Process. The analysis has been useful in recognizing areas that may have issues if developed. Additionally, Beaverhead County is currently in the process of updating the County's Growth Policy. The updated Growth Policy has information that has been taken from the past Pre-Disaster Mitigation Plan pertaining to areas that should not be developed due to certain hazards. A new hazard mitigation plan will be very valuable in the revision of the County Subdivision Regulations.

Additional opportunities for integration for each jurisdiction are listed below.:

Beaverhead County:

- Beaverhead County Pre-Disaster Mitigation Plan, 2017
- Beaverhead County Capital Improvement Plan
- Beaverhead County Community Wildfire Protection Plan, 2010
- Beaverhead County Emergency Operations Plan
- Beaverhead County Floodplain Hazard Management Regulations, 2015
- Beaverhead County Growth Management Ordinance, 2022
- Beaverhead County Flood Insurance Study, 1986
- Dam Emergency Action Plans

City of Dillon:

- City of Dillon Capital Improvement Plan
- City of Dillon Community/Growth Plan, 2016
- City of Dillon Floodplain Hazard Management Regulations
- City of Dillon Unified Zoning and Development Regulations, 1996

Town of Lima:

- Town of Lima Floodplain Hazard Management Regulations

As plans and ordinances are updated, a new hazard mitigation plan will be very valuable in general. The process for incorporation of the Regional HMP into other planning mechanisms by each jurisdiction can be as simple as cross-referencing the Hazard Mitigation Plan where applicable or including data, goals, or actions from the HMP in these mechanisms. The County utilizes a growth policy to guide development. Mitigation goals can be incorporated into future revisions of the policy to ensure limited or appropriate growth in high-hazard areas. Additionally, findings from the flood hazard profile can be leveraged to update the City of Dillon and Town of Lima floodplain regulations. Integrated planning is a key to building community resiliency.

## A.7.2 Monitoring, Evaluation and Updating the Plan

Beaverhead County will follow the procedures to review and update this plan in accordance with Montana Western Region as outlined in Chapter 6 of the Regional Plan. The County and municipalities realize that it is important to review and update this plan regularly and update it on a five-year cycle. The Beaverhead County Annex to the Montana Western Region Plan will be evaluated on an annual basis to determine the

effectiveness of programs, track the progress/status of the mitigation actions identified within the Mitigation Strategy, and to reflect changes in land development or programs that may affect mitigation priorities. The annual review will be initiated by OEM in consultation with MT DES.

### A.7.3 Continued Public Involvement

Continued public involvement will be followed as outlined in Chapter 6 of the base plan, with an emphasis on vulnerable populations or groups that could have been missed during the 2023 process. Beaverhead County, the City of Dillon, and the Town of Lima will actively involve the public in reviewing and updating this plan. A copy of the plan can be reviewed at the Beaverhead County Courthouse Commissioners' Office, Beaverhead County DES office, Dillon City Hall, and Lima Town Hall. The public is welcome to attend all LEPC meetings and the annual "Mitigation Year in Review" meeting to provide input and feedback. A press release will be distributed annually to the Dillon Tribune before the "Mitigation Year in Review" meeting to encourage public attendance. Written comments can be submitted year-round to the LEPC at:

Beaverhead County LEPC
c/o Beaverhead County Disaster and Emergency Services
2 S. Pacific St., Ste. #12
Dillon, MT 59725

Comments received will be reviewed and integrated where applicable during the annual and five-year plan updates.