

## Annex C Cascade County

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### C.1 Mitigation Planning and County Planning Team

This County Annex builds on previous versions of the Cascade County Hazard Mitigation Plan completed in 2017. 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 Great Falls
- Town of Belt
- Town of Cascade

The Town of Niehart participated in the 2017 County HMP and was invited to participate in the 2023 Regional HMP, but was unable to fully participate due to limited staff availability. Information on the Town's capabilities, vulnerabilities, and activities have been retained in the plan document for reference and in case the Town is able to join the regional planning process in the future.

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 with titles that participated can be referenced in Appendix A.

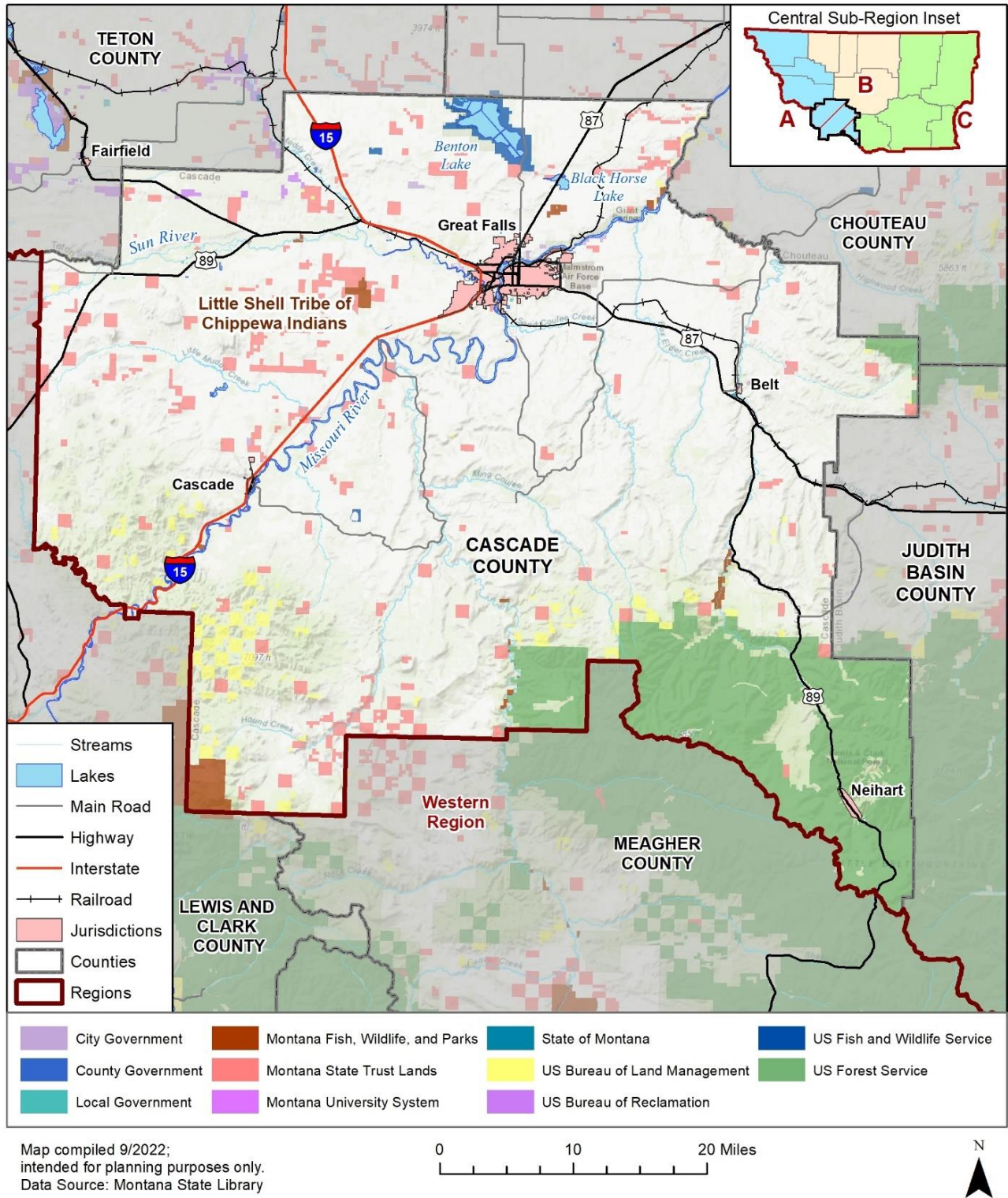
### C.2 Community Profile

#### C.2.1 Geography and Climate

Cascade County is in north-central Montana, east of the continental divide, in the transitional area between the Great Plains and Rocky Mountains and covers 2,698 square miles. The majority of Cascade County is relatively flat, and elevations range from 8,621 feet in the Highwood Mountains to 2,700 where the Missouri River exits the County. Incorporated communities include the City of Great Falls and the towns of Belt, Cascade, and Neihart. Unincorporated communities include Black Eagle, Centerville, Fort Shaw, Monarch, Sand Coulee, Simms, Stockett, Sun Prairie, Sun River, Tracy, Ulm, and Vaughn. Figure 1 displays a map of the County.

Cascade County is known for a moderate climate, with daily high temperatures between 75 and 85 degrees and low temperatures between 40 and 55 in the summer. In the winter, highs range between 20 and 40 and lows are typically between 10 and 25. Precipitation averages between 10 to 16 inches of rain annually and 63 inches of snowfall a year, but averages vary significantly across the County. Due to the location of Cascade County lying within the Chinook zone, high wind speeds upwards of 160 mph have been documented in the County.

**Figure C-1 Cascade County Base Map and Land Stewardship**



## C.2.2 Population Trends

According to the 2020 U.S. Census, Cascade County is the fifth most populous county in Montana with a total population of 84,414. The U.S. Census Bureau reported the County experienced a 3.5% increase in population since the 2010 census, with the greatest concentration of people residing in the City of Great Falls. Trends show that the population in rural towns is decreasing. An increasing population in the City of Great Falls and in Cascade County means there are more people exposed to hazards, which could result in a greater number of injuries or deaths due to these events in the future, particularly events that impact the City of Great Falls. Specific demographic variables for the County are provided in the Social Vulnerability section in Table C-1.

**Table C-1 Population Trends in Cascade County 1980-2020**

Incorporated Community	1980	1990	1980-1990 Change	2000	1990-2000 Change	2010	2000-2010 Change	2020	2010-2020 Change
City of Great Falls	56,884	55,125	-3.1%	56,690	2.8%	58,505	3.1%	60,442	3.3%
Town of Belt	825	571	-30.8%	633	10.9%	597	-5.7%	510	-14.6%
Town of Cascade	773	729	-5.7%	819	12.4%	685	-16.4%	648	-5.4%
Town of Neihart	91	53	-41.8%	91	71.7%	51	-44.0%	48	-5.9%
Cascade County	80,696	77,788	-3.6%	80,326	3.3%	81,513	1.5%	84,328	3.5%

Source: US Census 1980-2020

## C.2.3 Demographics

The 2016-2020 American Community Survey (ACS) reports demographic estimates for Cascade County, summarized in Table C-2 below.

**Table C-2 Demographic Estimates for Cascade County (2016-2020 ACS)**

Characteristic	Cascade County	State of Montana
Percentage of persons below 150% poverty estimate	23.4%	24.1%
Unemployment Rate estimate	3.7%	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	26.3%	21.4%
Percentage of persons with no high school diploma (age 25+) estimate	7.6%	7.5%
Percentage uninsured in the total civilian noninstitutionalized population estimate	7.3%	9.6%
Percentage of persons aged 65 and older estimate	18.6%	22.1%
Percentage of persons aged 17 and younger estimate	22.5%	21.3%
Percentage of civilian noninstitutionalized population with a disability estimate	15.0%	15.6%
Percentage of single-parent households with children under 18 estimate	7.4%	3.9%
Percentage of persons (age 5+) who speak English "less than well" estimate	0.2%	0.3%
Minority (other than white non-Hispanic) estimate	15.1%	14.6%
Percentage of housing in structures with 10 or more units estimate	11.1%	3.3%

Characteristic	Cascade County	State of Montana
Percentage of mobile homes estimate	8.3%	13.1%
Percentage of occupied housing units with more people than rooms estimate	1.8%	2.1%
Percentage of households with no vehicle available estimate	6.6%	4.9%
Percentage of persons in group quarters estimate	3.0%	2.8%
Percentage Female estimate	49.4%	49.7%
Median Age estimate	38.6	40.1
Median Gross Rent estimate	\$778	\$836
Median House Value estimate	\$184,400	\$244,900
Percent Unoccupied Housing Units estimate	11.7%	15.3%

Source: ACS 2016-2020

## C.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 NRI ranked the social vulnerability in Cascade County as “Relatively Moderate”, with a score of 39.9. This is higher than 59% of counties in Montana. Refer to HIRA for more information on social vulnerability. Demographic factors that can influence the social vulnerability rating are displayed in Table 3. The ACS reports that a significant portion of the population in Cascade County (around a quarter) is below the 150% poverty level. Additionally, 26.3% of the population in Cascade County experiences the housing cost-burden, which is 5% greater than the State of Montana average. Nearly a quarter of the population is aged 17 and younger, indicating that many individuals are still dependent on a caretaker, and 7.4% of families are single-parent households with children under 18, which is nearly double that of the Montana average. Finally, 11.1% of houses are structures with 10 or more units, which is more than triple the State of Montana average.

The CPT noted vulnerability concerns in jurisdictions across the County, including low-income rural residents who live in the floodplain, lack of childcare for those residents with children/dependents, and public notification systems that can reach all populations.

## C.2.5 Development Trends

Much of the population growth in Cascade County is occurring in urban areas, specifically in the City of Great Falls. The County provides a 2020 zoning map on a zoning information webpage, displayed in Figure 3. Over half of the total land in the county is used for agriculture. Mixed use zoning areas surround rivers and rural towns in the county. Almost all industrial, and suburban residential areas are being developed in areas surrounding the City of Great Falls. In the Towns of Cascade, Belt, and Neihart, primary land use is zoned for single family residential. It is anticipated that growth will continue in the City of Great Falls, but rural town growth will remain limited. The Cascade County Planning Board worked in collaboration with the four incorporated jurisdictions to formulate the Cascade County Growth Policy Update 2014. Specific growth trends by jurisdictions are listed below:

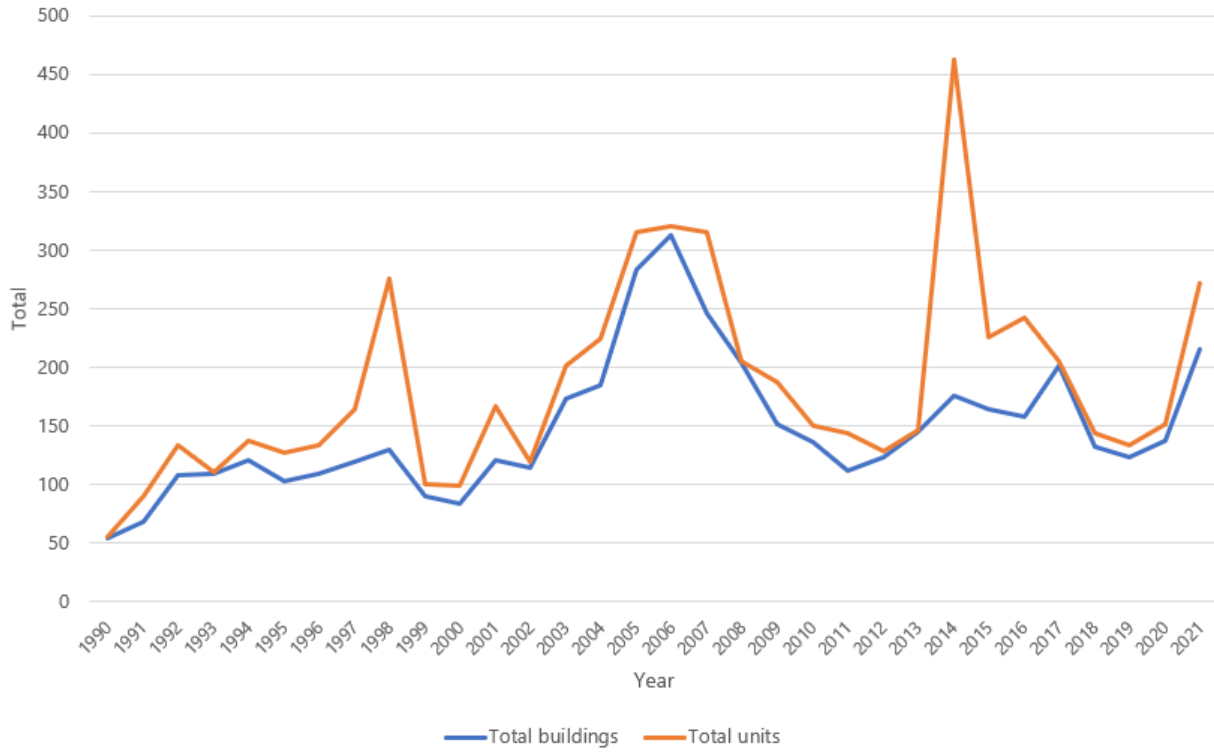
- **City of Great Falls:** The City of Great Falls updated their Growth Policy in 2013 to reflect development changes in the City. The 2013 Growth Policy reported that the City has expanded its boundaries by

14,000 acres, or approximately 66% of its total land area, in the past 50 years. Much of this is due to suburban sprawl, which is anticipated to continue over the next several decades. Subdivision requirements have been implemented by the city to regulate this growth.

- The CPT noted that residential development within the past 5 years has been concentrated directly east of the City of Great Falls and to the south of the City of Great Falls. In the county, the residential development tends to be on larger lots for one single family dwelling. Since COVID-19, the county has seen an increase in second dwelling units, including townhomes and duplexes in these areas. Commercial development is minimal in the county. Most of the county's commercial development is concentrated in the Black Eagle area just north of the Missouri River, adjacent to Great Falls. Industrial development is also concentrated in the area of Black Eagle and opposite the Missouri River's southern shore, adjacent to the City of Great Falls and Malmstrom Air Force Base.
- The CPT also noted the City of Great Falls currently has limited undeveloped property within the 100-year or 500-year floodplain within the City limits. A majority of this land is occupied by City parkland or previously developed residential subdivisions, such as the Fox Farm neighborhood. There are a limited number of larger infill lots along Lower River Road that have potential for low-density single-family development. Additionally, there is opportunity for the City's jurisdictional boundary to extend farther south along the Missouri River.
- **Town of Belt:** The Town of Belt has experienced 130 years of primarily unregulated development, creating a unique community. However, this unregulated development has also led to concerns such as buildings being constructed with no separation to mitigate the spread of fire. The Town of Belt was awarded a Community Development Block Grant from the Montana Department of Commerce. This grant will be used to create and adopt zoning and subdivision rules for the area within city limits. The goal of the zoning project is to maintain the existing small-town character, while still providing guidelines to protect the community and its residents from the negative impacts of unregulated growth and development.
- **Town of Cascade:** While the Town of Cascade does not expect significant growth, the town emphasizes the maintenance of their current infrastructure through their 2021 Capital Improvement Plan. This plan emphasized that a primary goal of the Town Council was to implement regular facility inspections and systematic maintenance. The CPT noted that growth has primarily been residential housing. The City has been updating its water, wastewater, sidewalks, streets infrastructure to keep up with this. Enforcement of safety issues, along with planning projects to assist residents has been a priority. The CPT also noted concerns with development in wildland areas, increasing total wildland urban interface (WUI) in the town.
- **Town of Neihart:** As noted in Section C.1, the Town of Neihart was unable to participate fully in the development of the 2023 Regional HMP; information on the Town is retained in the plan for reference, and in case they are able to rejoin the plan at a later date. Like the other rural towns in Cascade County, the Town of Neihart does not anticipate significant growth in the coming years. The Town of Neihart emphasizes the preservation of natural and agricultural resources, particularly the reservoir on O'Brien Creek, where the town receives its supply of water.

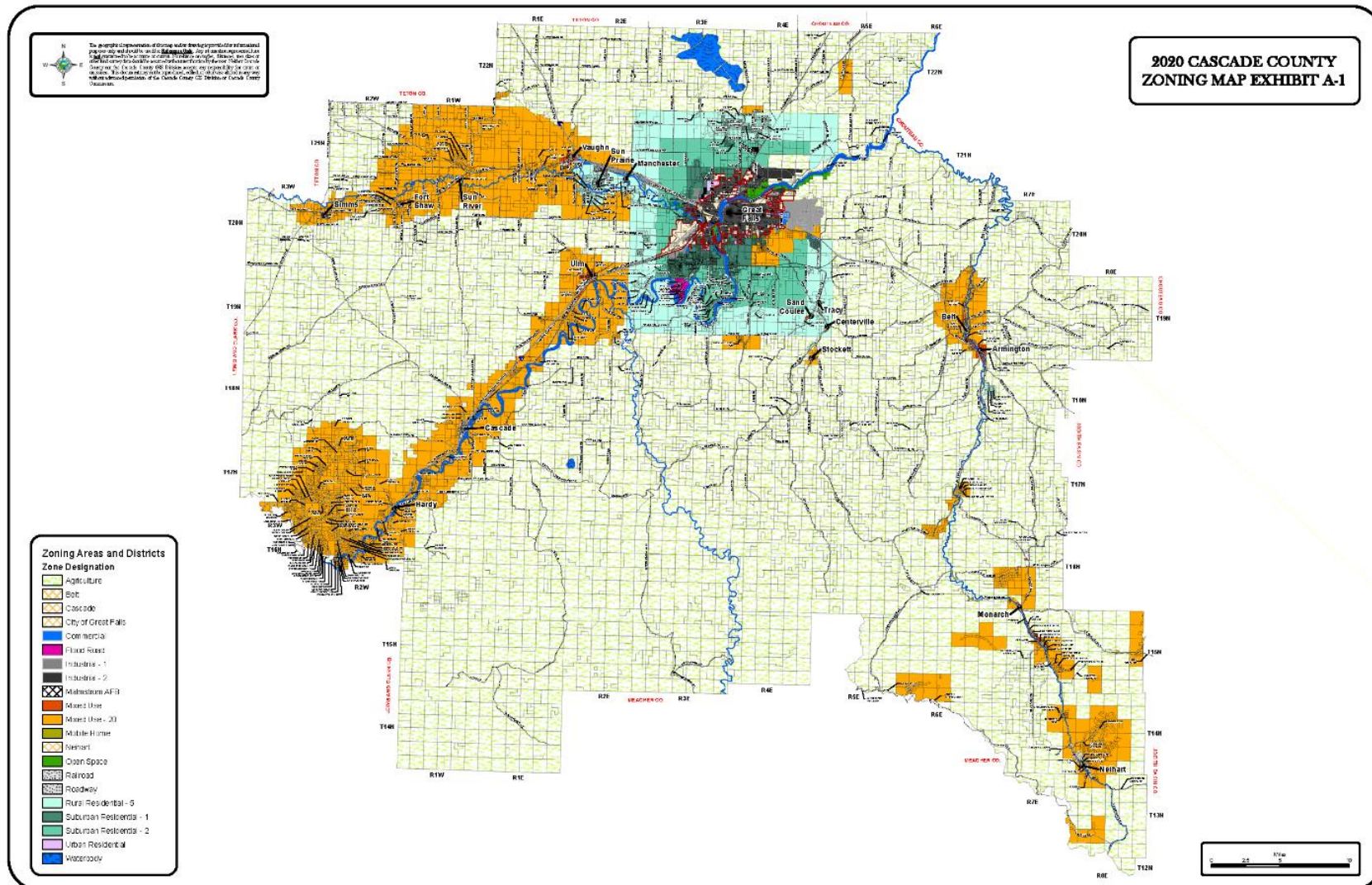
The U.S. Census Bureau Building Permit Survey provides information and local statistics on new privately-owned residential construction. Figure C-2 below displays the new privately owned housing unit authorizations by year in Cascade County. This data indicates that there was a significant increase in unit authorizations in 2014 and a trend of increasing authorizations since 2020. 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 C-2 New Privately Owned Housing Unit Authorizations**



Source: US Census Bureau, [https://www.census.gov/construction/bps/data\\_visualizations/index.html](https://www.census.gov/construction/bps/data_visualizations/index.html)

Figure C-3 Cascade Zoning Map 2020



Source: <https://www.cascadecountymt.gov/271/Zoning-Information>

## C.2.6 Economy

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

**Table C-3 Cascade County Economic Profile**

Economic Characteristics	Cascade County
Families Below Poverty Level	8.8%
Individuals Below Poverty Level	13.5%
Median Home Value	\$184,400
Median Household Income	\$52,049
Per Capita Income	\$30,572
Population > 16 Years Old in Labor Force	62.8%
Population Employed	57.1%

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

Table C-4 below shows the breakdown of employment in Cascade 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, followed by "Retail trade."

**Table C-4 Cascade County Occupation by Industry Profile**

Industry	Population Employed	Percent of Labor Force
Agriculture, forestry, fishing and hunting, and mining	1,352	3.6%
Construction	2,549	6.9%
Manufacturing	1,496	4.0%
Wholesale trade	1,177	3.2%
Retail trade	5,226	14.1%
Transportation and warehousing, and utilities	2,055	5.5%
Information	650	1.8%
Finance and insurance, and real estate and rental and leasing	2,201	5.9%
Professional, scientific, and management, and administrative and waste management services	2,727	7.3%
Educational services, and health care and social assistance	8,979	24.2%
Arts, entertainment, and recreation, and accommodation and food services	3,930	10.6%
Other services, except public administration	2,021	5.4%
Public administration	2,755	7.4%

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



## C.3 Hazard Identification and Risk Assessment

### C.3.1 Identified Hazards

The CPT reviewed significant hazards for inclusion in the hazard mitigation plan. Several changes were made from the 2017 Cascade County Hazard Mitigation Plan to be consistent with the 2023 Montana Central Region Hazard Mitigation Plan. In this plan update, railroad, aircraft, and highway incidents were combined to transportation incidents, which encompass all modes of transportation. Wildfire and structure fire were also combined into one wildfire hazard and the avalanche hazard was removed from the plan.

Cascade County's Overall Hazard Significance Summary Table provides a summary of the overall hazard significance for the hazards evaluated in this plan, showing variability by jurisdiction in Table C-5 below. More details on hazards can be found in Chapter 4 of the base plan.

**Table C-5 Cascade County Overall Hazard Significance by Hazard and Jurisdiction\***

Hazard	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Communicable Disease	Medium	Medium	Medium	Medium	Medium
Cyber-Attack	Medium	Medium	Low	Low	Low
Dam Failure	Medium	Medium	Low	Low	Low
Drought	High	Medium	High	High	High
Earthquake	Medium	Medium	Low	Low	Low
Flooding	High	High	High	High	High
Hazardous Materials Incident	High	High	High	High	Medium
Landslide	Low	Low	Low	Low	Low
Severe Summer Weather	Medium	Medium	Medium	Medium	Medium
Severe Winter Weather	High	High	Medium	Medium	Medium
Human Conflict	Medium	Medium	Low	Low	Low
Tornadoes & Windstorms	High	High	Medium	Medium	Medium
Transportation Accidents	Medium	Medium	Low	Low	Low
Volcanic Ash	Low	Low	Low	Low	Low
Wildfire	High	High	High	High	Medium

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

Geographic Extent	Probability of Future Occurrences
<p><u>Negligible</u>: Less than 10 percent of planning area or isolated single-point occurrences</p> <p><u>Limited</u>: 10 to 25 percent of the planning area or limited single-point occurrences</p>	<p><u>Unlikely</u>: Less than 1 percent probability of occurrence in the next year or has a recurrence interval of greater than every 100 years.</p> <p><u>Occasional</u>: Between a 1 and 10 percent probability of occurrence in the next year or has a recurrence interval of 11 to 100 years.</p>

<p><u>Significant</u>: 25 to 75 percent of planning area or frequent single-point occurrences</p> <p><u>Extensive</u>: 75 to 100 percent of planning area or consistent single-point occurrences</p> <p><b>Potential Magnitude/Severity</b></p> <p><u>Negligible</u>: 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.</p> <p><u>Limited</u>: 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 the response capability of the jurisdiction, or results in very few permanent disabilities.</p> <p><u>Critical</u>: 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.</p> <p><u>Catastrophic</u>: 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.</p>	<p><u>Likely</u>: Between 10 and 90 percent probability of occurrence in the next year, or has a recurrence interval of 1 to 10 years</p> <p><u>Highly Likely</u>: Between 90 and 100 percent probability of occurrence in the next year or has a recurrence interval of less than 1 year.</p> <p><b>Overall Significance</b></p> <p><u>Low</u>: 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 with a minimal or unknown record of occurrences/impacts or for hazards with minimal mitigation potential.</p> <p><u>Medium</u>: 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.</p> <p><u>High</u>: 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.</p>
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### C.3.2 Building Inventory and Assets

People, property, critical facilities/infrastructure, and other important assets in Cascade County are exposed to the hazards identified in this plan. Table C-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 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 C-6 Cascade County Building Inventory and Value by Jurisdiction**

Jurisdiction	Improved Parcels	Improved Value	Content Value	Total Value
Belt	267	\$29,775,202	\$15,942,099	\$45,717,301
Cascade	328	\$48,914,403	\$28,516,944	\$77,431,347
Great Falls	21,636	\$5,460,122,874	\$3,342,448,272	\$8,802,571,146
Neihart	163	\$17,032,443	\$9,479,898	\$26,512,341
Cascade County	9,067	\$1,880,925,136	\$1,122,253,933	\$3,003,179,069
<b>Total</b>	<b>31,461</b>	<b>\$7,436,770,058</b>	<b>\$4,518,641,145</b>	<b>\$11,955,411,203</b>

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

Total building exposure within Cascade County based on an analysis of improved parcels is nearly \$12 billion, with over \$7 billion in improved value properties and \$4.5 billion of contents at-risk. Of the nearly \$12 billion of total building exposure in Cascade County, the City of Great Falls accounts for \$8.8 billion (73.6%). Residential properties represent the greatest portion of structures in the County, accounting for \$8.9 billion (75.2%).

**Table C-7 Cascade County Total Exposure by Jurisdiction and Property Type**

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value
Belt	Exempt	12	\$2,011,546	\$2,011,546	\$4,023,092
	Residential	252	\$27,666,206	\$13,833,103	\$41,499,309
	Vacant	3	\$97,450	\$97,450	\$194,900
	<b>Total</b>	<b>267</b>	<b>\$29,775,202</b>	<b>\$15,942,099</b>	<b>\$45,717,301</b>
Cascade	Exempt	16	\$8,112,145	\$8,112,145	\$16,224,290
	Residential	309	\$40,794,918	\$20,397,459	\$61,192,377
	Vacant	3	\$7,340	\$7,340	\$14,680
	<b>Total</b>	<b>328</b>	<b>\$48,914,403</b>	<b>\$28,516,944</b>	<b>\$77,431,347</b>
Great Falls	Commercial	86	\$46,007,555	\$46,007,555	\$92,015,110
	Exempt	388	\$897,194,064	\$897,194,064	\$1,794,388,128
	Industrial	26	\$139,852,995	\$209,779,493	\$349,632,488
	Residential	21,111	\$4,375,202,200	\$2,187,601,100	\$6,562,803,300
	Vacant	25	\$1,866,060	\$1,866,060	\$3,732,120
	<b>Total</b>	<b>21,636</b>	<b>\$5,460,122,874</b>	<b>\$3,342,448,272</b>	<b>\$8,802,571,146</b>
Neihart	Exempt	2	\$397,330	\$397,330	\$794,660
	Mining	12	\$1,373,092	\$1,373,092	\$2,746,184
	Residential	144	\$15,105,091	\$7,552,546	\$22,657,637
	Vacant	5	\$156,930	\$156,930	\$313,860
	<b>Total</b>	<b>163</b>	<b>\$17,032,443</b>	<b>\$9,479,898</b>	<b>\$26,512,341</b>
Cascade County	Agricultural	1,060	\$197,787,234	\$197,787,234	\$395,574,468
	Commercial	10	\$5,835,510	\$5,835,510	\$11,671,020
	Exempt	133	\$111,808,861	\$111,808,861	\$223,617,722
	Industrial	10	\$20,162,630	\$30,243,945	\$50,406,575
	Mining	44	\$4,005,663	\$4,005,663	\$8,011,326

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value
	Residential	7,689	\$1,537,505,037	\$768,752,519	\$2,306,257,556
	Vacant	121	\$3,820,201	\$3,820,201	\$7,640,402
	<b>Total</b>	<b>9,067</b>	<b>\$1,880,925,136</b>	<b>\$1,122,253,933</b>	<b>\$3,003,179,069</b>
	<b>Grand Total</b>	<b>31,461</b>	<b>\$7,436,770,058</b>	<b>\$4,518,641,145</b>	<b>\$11,955,411,203</b>

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

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

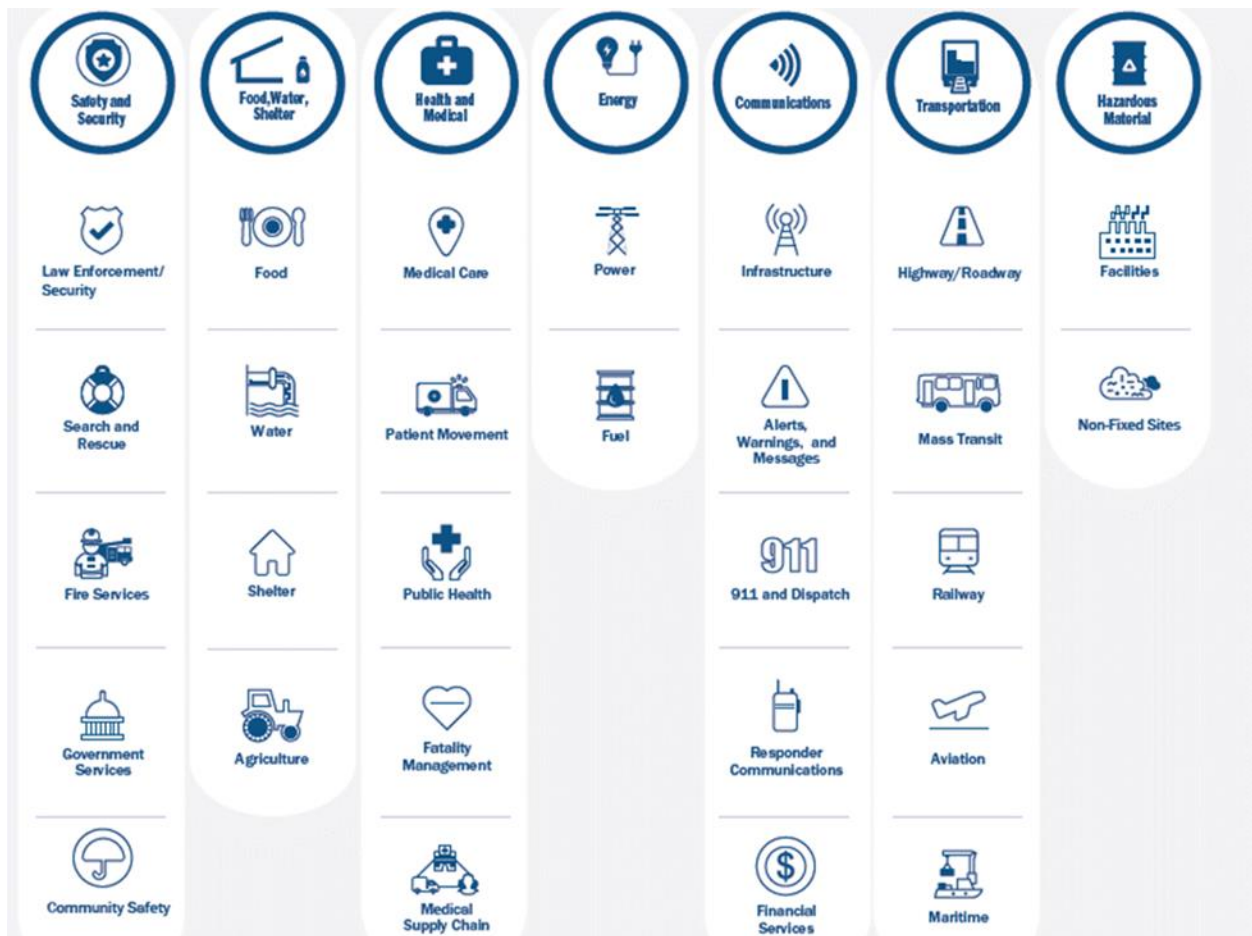
A critical facility is defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. Much of this data is based on GIS databases associated with the 2022 Homeland Infrastructure Foundation-Level Data (HIFLD). Other critical 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 incidents, flood, and wildfire.

FEMA organizes critical facilities into seven lifeline categories as shown in Figure C-4. 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.

Table C-8 below summarizes the number of critical facilities by jurisdiction. Figure C-5 through Figure C-8 display the location of critical facilities by FEMA Lifeline in Cascade County, the City of Great Falls, the Town of Cascade, and the Town of Belt.

**Figure C-4 FEMA Lifeline Categories**



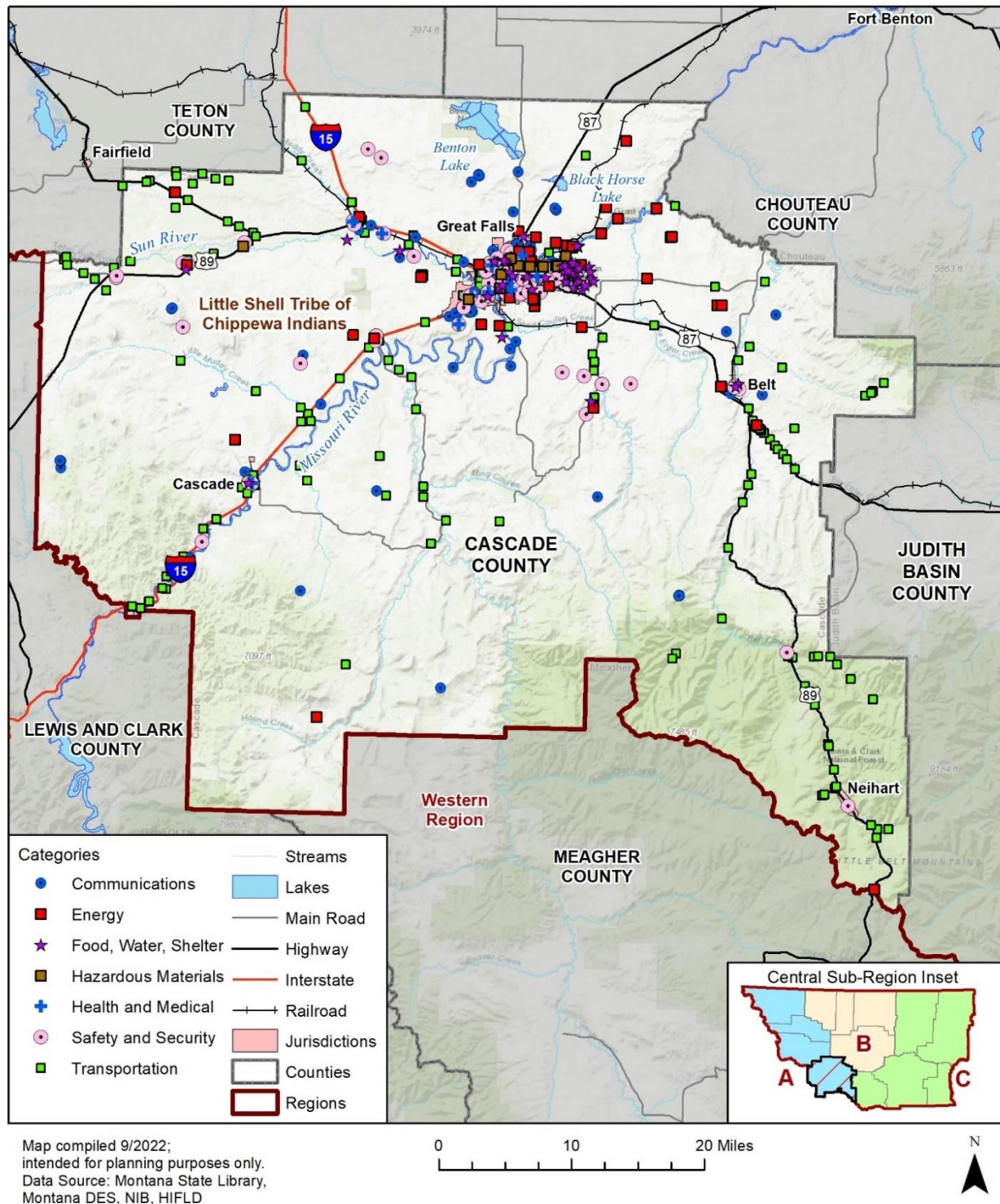
Source: FEMA

**Table C-8 Critical Facilities by Jurisdiction in Cascade County**

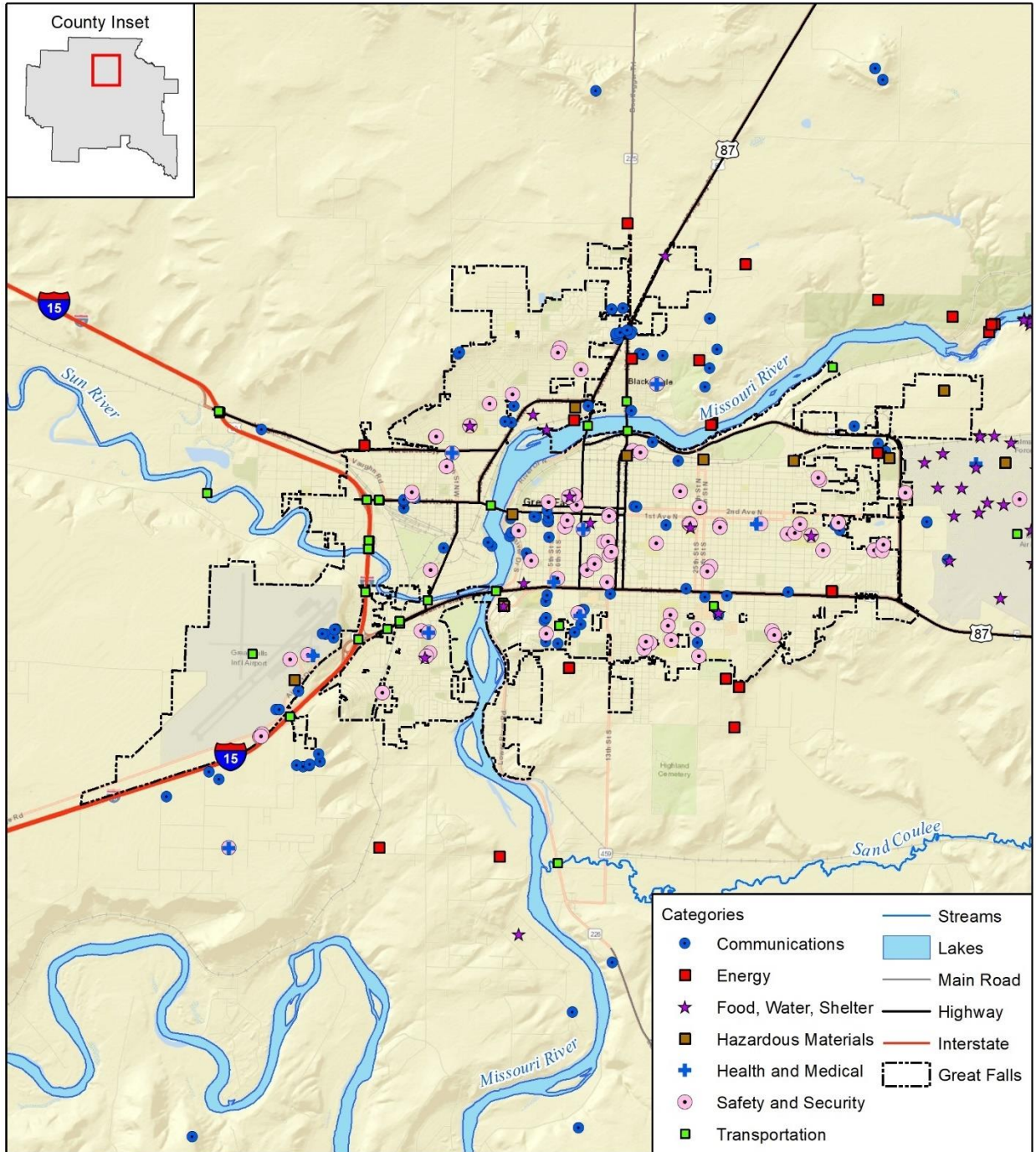
Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Material	Health and Medical	Safety and Security	Transportation	Total
Belt	-	-	-	-	-	5	1	<b>6</b>
Cascade	2	-	1	-	1	4	2	<b>10</b>
Great Falls	69	3	12	10	7	86	23	<b>210</b>
Neihart	-	-	-	-	-	1	1	<b>2</b>
Cascade County	94	51	39	2	5	35	164	<b>390</b>
<b>Total</b>	<b>165</b>	<b>54</b>	<b>52</b>	<b>12</b>	<b>13</b>	<b>131</b>	<b>191</b>	<b>618</b>

Source: HIFLD 2022, MT DES, National Bridge Inventory

**Figure C-5 Cascade County Critical Facilities**



**Figure C-6 Great Falls Critical Facilities**



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

**Figure C-7 Town of Cascade Critical Facilities**

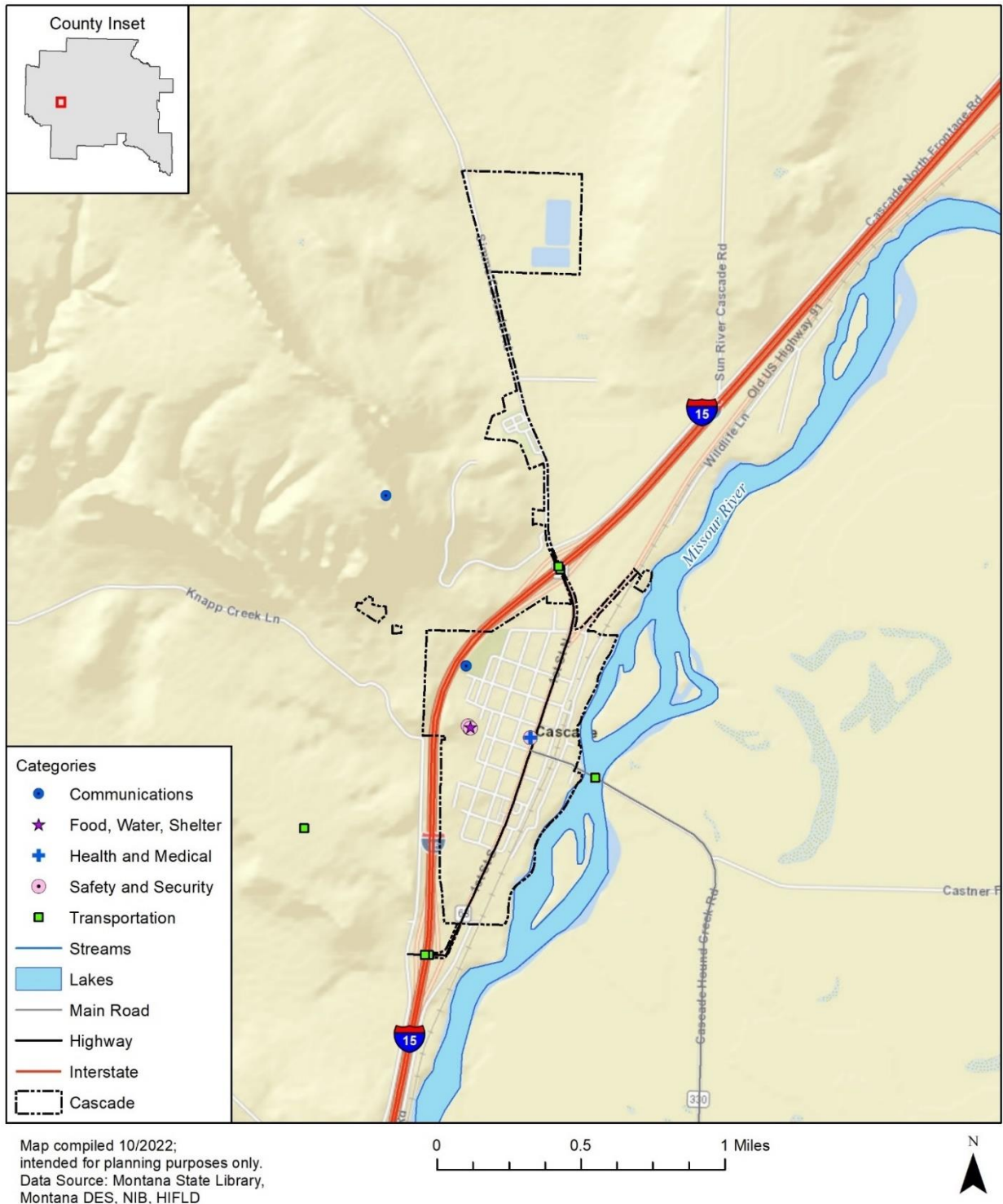
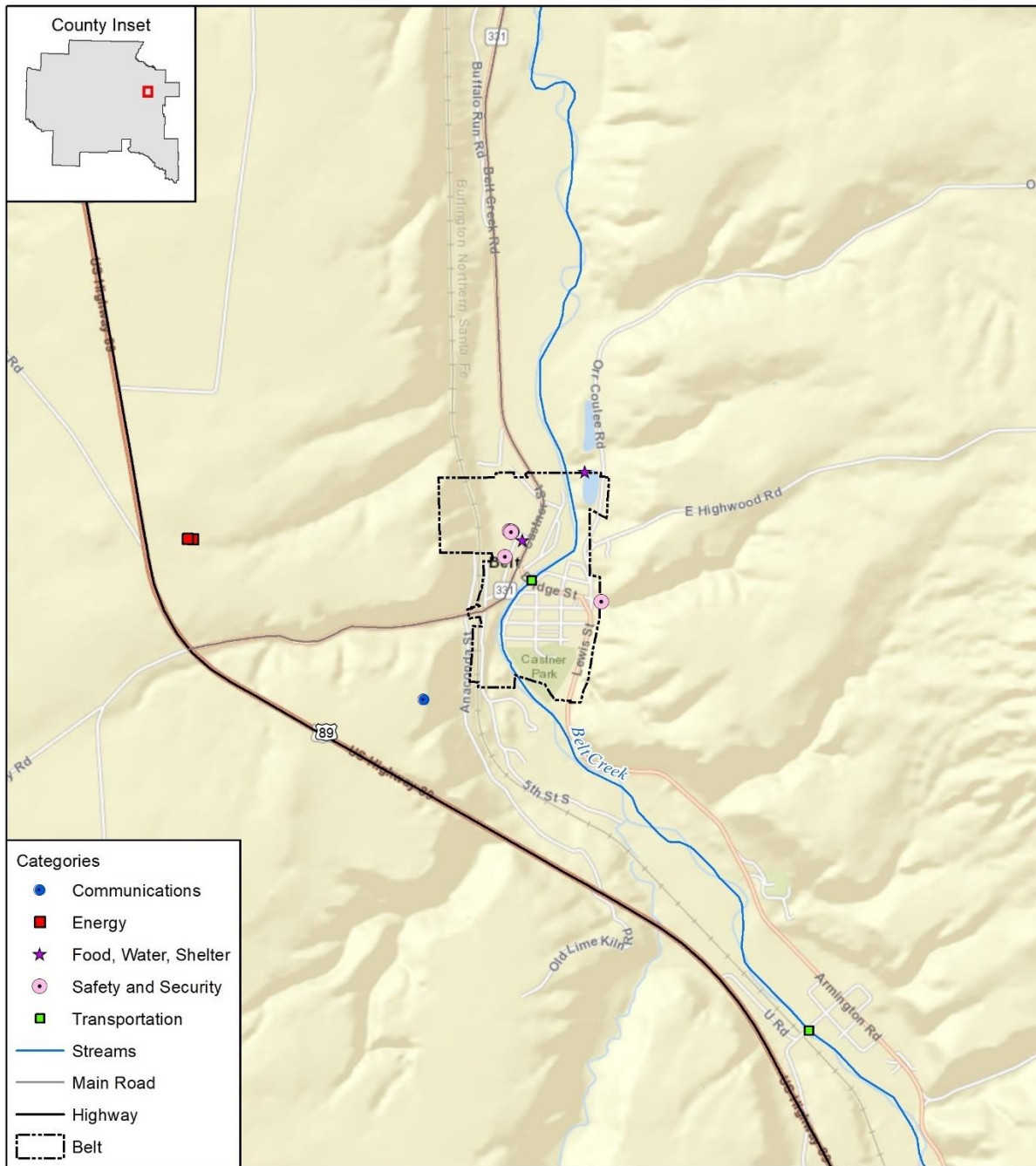




Figure C-8 Town of Belt Critical Facilities



Map compiled 4/2023;  
intended for planning purposes only.  
Data Source: Montana State Library,  
Montana DES, NIB, HIFLD

0 0.5 1 Miles



### Natural, Historic, and Cultural Assets

Assessing the vulnerability of Cascade 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 C-9 below lists the properties that are identified as having cultural and historic significance in Cascade County as recorded by the National Register of Historic Places.

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

Property Name	City/Town	Location	Date Listed
Belt Commercial Historic District	Belt	Castner St.	12/23/2004
Belt Jail	Belt	Castner St.	3/10/1980
Burlingame School	Belt	Address Restricted	6/1/1992
Crocker--Jarvi Homestead	Belt	Address Restricted	6/1/1992
Heikkila--Mattila Homestead	Belt	Address Restricted	6/1/1992
Kraftenberg Homestead	Belt	Address Restricted	6/1/1992
Lewis--Nevala Homestead	Belt	Address Restricted	6/1/1992
Stone Homestead	Belt	Address Restricted	6/1/1992
Wargelin--Warila Homestead	Belt	Address Restricted	6/1/1992
Hardy Bridge	Cascade	Milepost 6 on Old US 91	1/4/2010
Russell, Charlie and Nancy, Honeymoon Cabin	Cascade	20 Russell Dr. S	12/16/2005
St. Peter's Mission Church and Cemetery	Cascade	W of Cascade	8/3/1984
Tower Rock	Cascade	8 mi. S of Cascade at I-15 Interchange 247	3/18/2002
Fort Shaw Historic District and Cemetery	Fort Shaw	1 mi. NW of Town of Fort Shaw	1/11/1985
Arvon Block	Great Falls	114--116 First Ave. S.	9/26/1991
Cascade County Courthouse	Great Falls	415 2nd Ave., N.	4/16/1980
Chicago, Milwaukee and St. Paul Passenger Depot	Great Falls	River Dr., N	10/13/1988
Collins, Timothy Edwards, Mansion	Great Falls	1003--1017 2nd Ave., NW	8/27/1980
East Side Neighborhood Historic District	Great Falls	Central Ave. and 1st Ave. between 15th and 16th Sts.	4/19/2016
First United Methodist Church Parsonage	Great Falls	113 Sixth St. N	12/23/2003
Ford, Lee M., House	Great Falls	401 4th Ave. N.	8/10/1990

Property Name	City/Town	Location	Date Listed
Great Falls Central Business Historic District	Great Falls	Second Ave.N, First Ave. N, Central Ave., First Ave S.	8/20/2004
Great Falls Central High School	Great Falls	1400 1st Ave., N.	9/1/1976
Great Falls High School Historic District	Great Falls	1900 2nd Ave., S.	3/20/2013
Great Falls Northside Residential Historic District	Great Falls	200--900 blocks 4th Ave. N., 100--900 blocks 3rd Ave. N. and 500--900 blocks 2nd Ave. N.	4/1/1991
Great Falls Portage	Great Falls	SE of Great Falls at jct. of U.S. 87, 89, and 91	10/15/1966
Great Falls Railroad Historic District	Great Falls	Park and River Drs., 100--400 blks. 2nd St. S., 100--200 blks. 1st and 2nd Aves. S. and 100--300 blks. 3rd St. S.	2/19/1993
Great Falls West Bank Historic District	Great Falls	300 and 400 Blocks, 3rd St NW	8/30/2010
Margaret Block	Great Falls	413-415 Central Ave.	8/2/1984
Masonic Temple	Great Falls	821 Central Ave.	12/28/2000
Mullan Road	Great Falls	N of Great Falls in Benton Lake National Wildlife Refuge	3/13/1975
Northern Montana State Fairground Historic District	Great Falls	3rd St., NW	1/13/1989
Randall, Harry E., House	Great Falls	1003 Fourth Ave. N	3/27/1986
Roberts Building	Great Falls	520--526 Central Ave.	9/12/1985
Russell, Charles M., House and Studio	Great Falls	1217--1219 4th Ave., N.	10/15/1966
Tenth Street Bridge	Great Falls	10th St. across the Missouri R.	4/25/1996
Union Bethel African Methodist Episcopal Church	Great Falls	916 Fifth Ave. S	9/11/2003
Ursuline Academy	Great Falls	2300 Central Ave.	9/26/1991
US Post Office and Courthouse--Great Falls	Great Falls	215 First Ave. N	3/14/1986
Warden, O.S., Bridge	Great Falls	10th Ave. S. across Missouri R.	3/26/2012
Neihart School	Neihart	200 S. Main St.	3/7/2003
Adam's, J. C., Stone Barn	Sun River	NE of Sun River off U.S. 81	1/12/1979
First Peoples Buffalo Jump	Ulm	Address Restricted	9/28/2015
Ulm Pishkun	Ulm	Address Restricted	12/17/1974
Vaughn, Robert, Homestead	Vaughn	Vaughn Cemetery Rd. (Cascade County Rd.)	6/14/1982
Old U.S. Highway 91 Historic District	Wolf Creek	Between I-15 Spring Cr. & Hardy Cr. Interchanges	8/27/2013

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. Cascade County encompasses five lakes (Benton Lake, Black Horse Lake, Cannon Lake, Horseshoe Lake, and Schrammeck Lake) in addition to 10 reservoirs. The Missouri River is the most significant river that runs through Cascade

County, but smaller rivers and creeks including Belt Creek, Dearborn River, Roe River, Smith River, and Sun River, also run through the County.

### **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.

## **C.4 Vulnerability to Specific Hazards**

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 risk does not vary significantly enough from the rest of the Region and thus the reader should refer to Chapter 4. Only unique issues or vulnerabilities are discussed, where applicable.

- 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

### **C.4.1 Communicable Disease**

All populations are vulnerable to communicable disease. Elder populations, young children, and individuals with pre-existing medical conditions are more likely to face long lasting impacts from communicable disease. While areas of high population density, such as the City of Great Falls, 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 ranked as medium for all counties in the Central Region and there were no noted differences in ranking of communicable disease by jurisdiction in Cascade County.

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

### **C.4.2 Cyber-Attack**

All servers, networks, and users are vulnerable to cyber-attacks in Central Montana. Cascade County is ranked as medium, along with most other counties in the Region. The City of Great Falls ranked as higher vulnerability to cyber-attack than the other jurisdictions in Cascade County due to the recorded attack in 2008 on Davidson Companies, which resulted in 226,000 compromised records. There is also a dense concentration of infrastructure and increasing development in the City of Great Falls, making the city a target for future cyber-attacks.

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

### C.4.3 Dam Failure

Dam failure in Cascade County is ranked as medium. There are five high hazard dams and four significant hazard dams located in Cascade County. The table below identifies the dams and the affected communities (participating in this plan). Refer to Chapter 4 for a discussion of the dam failure risk relative to Cascade County and the Central Region.

**Table C-10 Dams in Cascade County**

Hazard Class	Dam Name	Owner	River	Nearest Downstream City	Distance To Nearest Downstream City (Miles)	Emergency Action Plans (EAP)
High	Cochrane	Northwestern Energy	Missouri River	Fort Benton	35	Yes
High	Ryan	Northwestern Energy	Missouri River	Fort Benton	33	Yes
High	Black Eagle	Northwestern Energy	Missouri River	Fort Benton	41	Yes
High	Rainbow	Northwestern Energy	Missouri River	Fort Benton	38	Yes
High	Morony	Northwestern Energy	Missouri River	Fort Benton	29	Yes
Significant	Manchester	Robert Stephens Jr.	Tr - Sun River		0	N/A
Significant	Middle Creek Lake (Cascade)	Sieben Livestock Co	Middle Creek (E.F.Hound Creek)	Cascade	37	N/A
Significant	Gollaher Reservoir	Gollaher Ranch Co.	Willow Creek	Ulm	22	N/A
Significant	Spun	Vonne Hall	Tr-Missouri River	Ulm	19	N/A

Source: National Inventory of Dams (NID)

With five high and four significant hazard dams in the planning area, dam failure flooding could result in significant property losses and loss to human life. There are also several high hazard dams upstream of Cascade County in Lewis and Clark County, which pose inundation risk along the Missouri River to the Town of Cascade and Great Falls. A dam incident at any of these locations could result in severe inundation to these communities. Figure C-9 displays the location of dams in Cascade and Lewis and Clark Counties. There are no federally owned dams within Cascade County, but Canyon Ferry Dam is a federally owned dam within Lewis and Clark County. Meagher County has mapped inundation from four non-federally owned high hazard dams that intersect with the Missouri River upstream of Great Falls.

Table C-11 summarizes the estimated number of improved parcels, building values, and people within inundation zones (limited to high hazard dams that are not federally owned) in Cascade County by property type. Residential property has the greatest total number of improved parcels and greatest total improved and content values at stake, at nearly \$48.6 million. Table C-12 summarizes the critical facilities located in Cascade County which are at risk to dam inundation. The Transportation Lifeline has the greatest number of exposed facilities, the majority of which are likely bridges. It is important to note that the inundation data used in analysis is limited to unincorporated areas from dams located outside of the county. Four of the five high hazard dams are downstream of Great Falls, but Black Eagle dam is within Great Falls and could create a risk. The estimated risk displayed in the table below is likely lower than actual risk.

**Table C-11 Cascade County Parcels at Risk to Overall Dam Inundation by Jurisdiction**

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value	Population
	Agricultural	63	\$10,424,694	\$10,424,694	\$20,849,388	

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value	Population
Cascade County	Exempt	9	\$1,369,060	\$1,369,060	\$2,738,120	
	Residential	240	\$32,375,667	\$16,187,834	\$48,563,501	552
	Vacant	5	\$116,710	\$116,710	\$233,420	
	<b>Total</b>	<b>317</b>	<b>\$44,286,131</b>	<b>\$28,098,298</b>	<b>\$72,384,429</b>	<b>552</b>

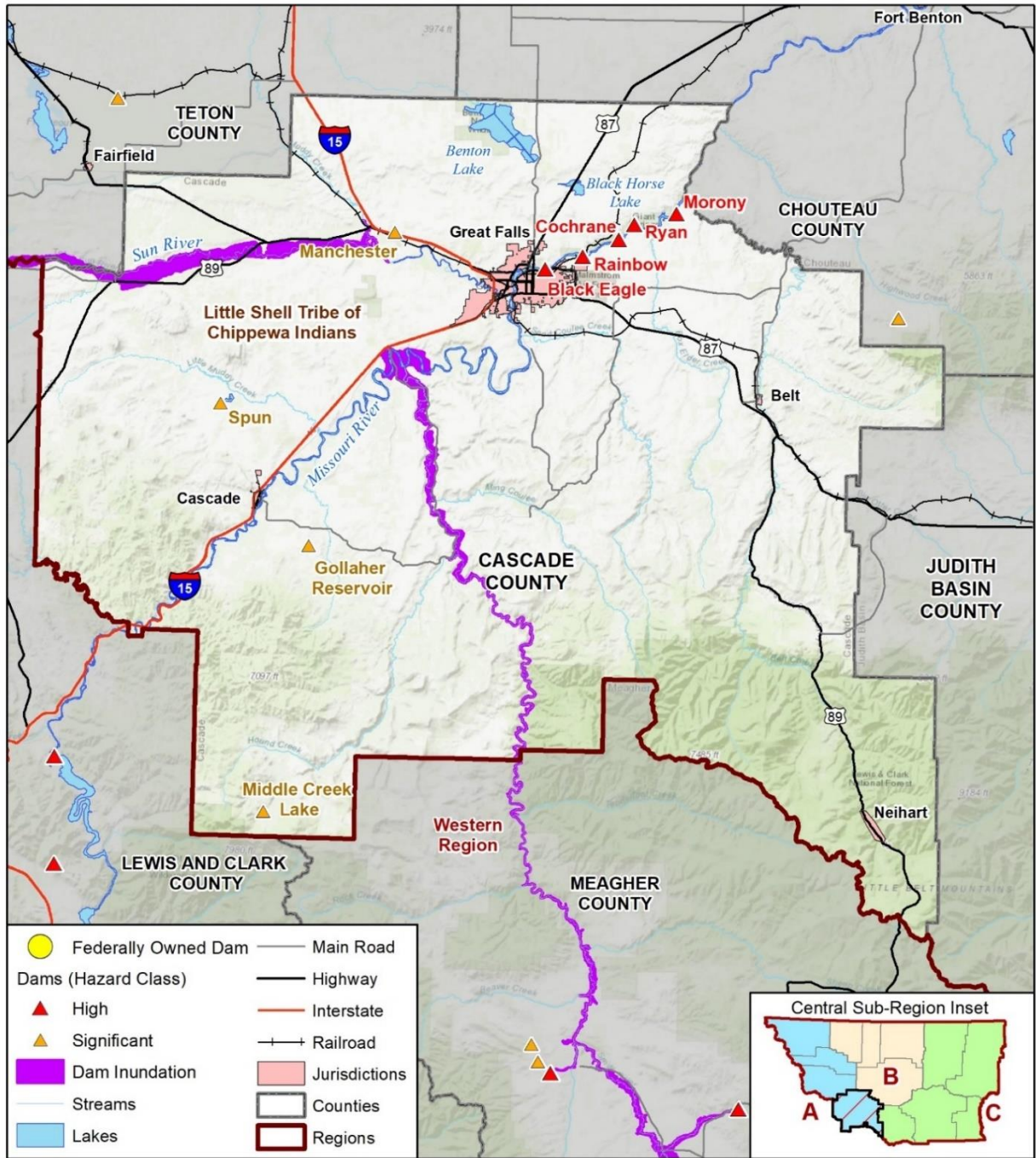
Source: County Assessor data, NID, MT DNRC, WSP GIS Analysis

**Table C-12 Cascade 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
Cascade County	-	-	1	1	-	1	13	<b>16</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>13</b>	<b>16</b>

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

**Figure C-9 Cascade County Dam Inundation**



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

### C.4.4 Drought

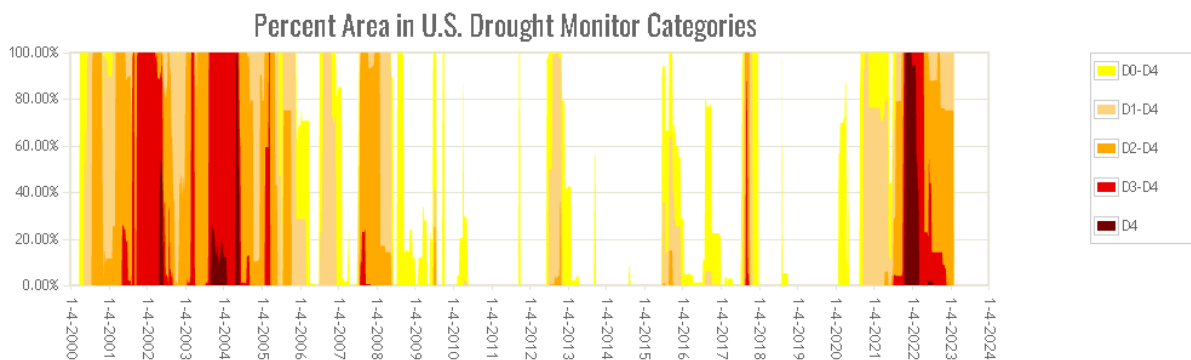
Drought was rated as a hazard of high concern in Cascade County. Between 2012 and 2021, Cascade County experienced 11 USDA emergency drought declarations, which is slightly more than the average number of

drought declarations for the Central Region. The Drought Impact Reporter (2000-2021) reported that Cascade County has the greatest number of drought impacts in the Central Region, with 78 types of drought impacts compared to Phillips, the second highest county, with only 53 impacts.

The U.S. Drought Monitor (USDM) is a national data set released weekly, showing the severity of drought in locations across the nation. A time series showing the severity of drought in Cascade County between 2000 and 2022 (since the USDM came into being) is shown below.

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

**Figure C-10 USD M Drought Timeseries for Cascade County**



#### C.4.5 Earthquake

There are several known fault systems throughout the State of Montana, mostly concentrated in the Western Region. However, large magnitude earthquakes that occur in the Western Region are likely to have impacts on counties in the Central Region. The potential severity of shaking and impacts to casualties and damage is not uniform across the Central Region and is likely to impact counties along the Western portion of the Region, including Cascade County. Earthquake hazards in Cascade County are therefore ranked as medium overall significance.

According to a Hazus probabilistic loss analysis conducted for a scenario with 2% in 50 years recurrence, Cascade County has the greatest direct economic losses in the Central Region, with an estimated \$85million in total direct losses. The City of Great Falls is likely to experience the greatest number of losses due to the concentration of people and infrastructure relative to the rest of the County. Older and historic buildings will be more vulnerable to earthquake shaking.

Refer to Chapter 4 for a discussion of the earthquake risk relative to Cascade County and the Central Region.

#### C.4.6 Flooding

Cascade County is one of the four Counties/Tribes in the Central Region that rated flood as a high significance hazard. The CPT noted specific vulnerabilities in Cascade County: farmers and others living in unincorporated communities along the Sun River tend to be lower-income individuals. The same trends exist in the Gibson Flats area. These are areas of the County that are within the Special Flood Hazard Area (SFHA). A large portion of the Sun River is approximate Zone A for flood insurance purposes. The Floodplain Regulations requires detailed encroachment analysis in these areas for work in the SFHA that is usually cost prohibitive to local property owners. This results in property that is not maintained to withstand or reduce flood risks all together, e.g., limited bank stabilization projects. The County also has at least one assisted living facility in the SFHA of the Missouri River. Woodland Estates Subdivisions were approved prior to FEMA



minimum requirements, and, in a flood emergency, this area will be cut off from emergency services unless accessed by boat. The CPT also noted the Missouri and Sun Rivers are likely to flood every spring depending on mountain snowpack melting and rain.

The Sun River LB levee system is located within the City of Great Falls, Montana, west of the Missouri River in Cascade County. The system consists of a single levee segment along the left bank of the Sun River and 2250 feet of improved channel on the Sun River, near its confluence with the Missouri River. It is shown on the FEMA mapping as an area of reduced risk to flooding.

There have been two federally declared flooding events in Cascade County since 1974. Cascade County also has the greatest total NFIP coverage in the Central Region, with \$78,188,200 in coverage (54.4% of the total coverage in the Region). Cascade County also has the greatest number of repetitive loss structures with a total of 9 structures and \$170,515.43 paid out. Cascade County has the greatest total population located in the 1% annual floodplain, with 2,960 exposed individuals. Figure C-11 below displays the flood hazards in Cascade County.

Table C-13 below summarizes the counts and improved values of parcels in the county, broken out by jurisdiction and property type, 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 25% of the total value, based on FEMA depth-damage curves. Cascade County has digital FEMA NFHL data for both the county and its jurisdictions, and this was the data relied on for analysis. The table indicates the greatest flood losses in the unincorporated County followed by Great Falls and Belt. The majority of the structures at risk are residential.

**Table C-13 Cascade County Parcels at Risk to 1% Flood Hazard by Jurisdiction**

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value	Estimated Loss	Population
Belt	Exempt	5	\$1,279,706	\$1,279,706	\$2,559,412	\$639,853	
	Residential	99	\$11,716,262	\$5,858,131	\$17,574,393	\$4,393,598	228
	Vacant	1	\$21,560	\$21,560	\$43,120	\$10,780	
	<b>Total</b>	<b>105</b>	<b>\$13,017,528</b>	<b>\$7,159,397</b>	<b>\$20,176,925</b>	<b>\$5,044,231</b>	<b>228</b>
Cascade	Residential	3	\$687,610	\$343,805	\$1,031,415	\$257,854	7
	<b>Total</b>	<b>3</b>	<b>\$687,610</b>	<b>\$343,805</b>	<b>\$1,031,415</b>	<b>\$257,854</b>	<b>7</b>
Great Falls	Commercial	7	\$1,266,410	\$1,266,410	\$2,532,820	\$633,205	
	Exempt	2	\$651,305	\$651,305	\$1,302,610	\$325,653	
	Residential	276	\$65,307,742	\$32,653,871	\$97,961,613	\$24,490,403	635
	<b>Total</b>	<b>285</b>	<b>\$67,225,457</b>	<b>\$34,571,586</b>	<b>\$101,797,043</b>	<b>\$25,449,261</b>	<b>635</b>
Neihart	Mining	2	\$123,940	\$123,940	\$247,880	\$61,970	
	Residential	37	\$4,854,500	\$2,427,250	\$7,281,750	\$1,820,438	85
	<b>Total</b>	<b>39</b>	<b>\$4,978,440</b>	<b>\$2,551,190</b>	<b>\$7,529,630</b>	<b>\$1,882,408</b>	<b>85</b>
Cascade County	Agricultural	85	\$16,769,150	\$16,769,150	\$33,538,300	\$8,384,575	
	Commercial	3	\$2,828,570	\$2,828,570	\$5,657,140	\$1,414,285	
	Exempt	14	\$3,880,530	\$3,880,530	\$7,761,060	\$1,940,265	
	Residential	872	\$178,271,244	\$89,135,622	\$267,406,866	\$66,851,717	2,006
	Vacant	15	\$339,000	\$339,000	\$678,000	\$169,500	
	<b>Total</b>	<b>989</b>	<b>\$202,088,494</b>	<b>\$112,952,872</b>	<b>\$315,041,366</b>	<b>\$78,760,342</b>	<b>2,006</b>
<b>Grand Total</b>		<b>1,421</b>	<b>\$287,997,529</b>	<b>\$157,578,850</b>	<b>\$445,576,379</b>	<b>\$111,394,095</b>	<b>2,960</b>

Sources: DNRC, Hazus, FEMA NFHL

Cascade County has a total of 66 critical facilities located in the 1% annual chance floodplain. 51 are transportation lifelines, five are food, water and shelter, three are energy lifelines and one is a hazardous

material facility. Blaine County has the 3<sup>rd</sup> highest amount of critical facilities located in the SFHA in the Central Region. This is shown in Table C-14 below.

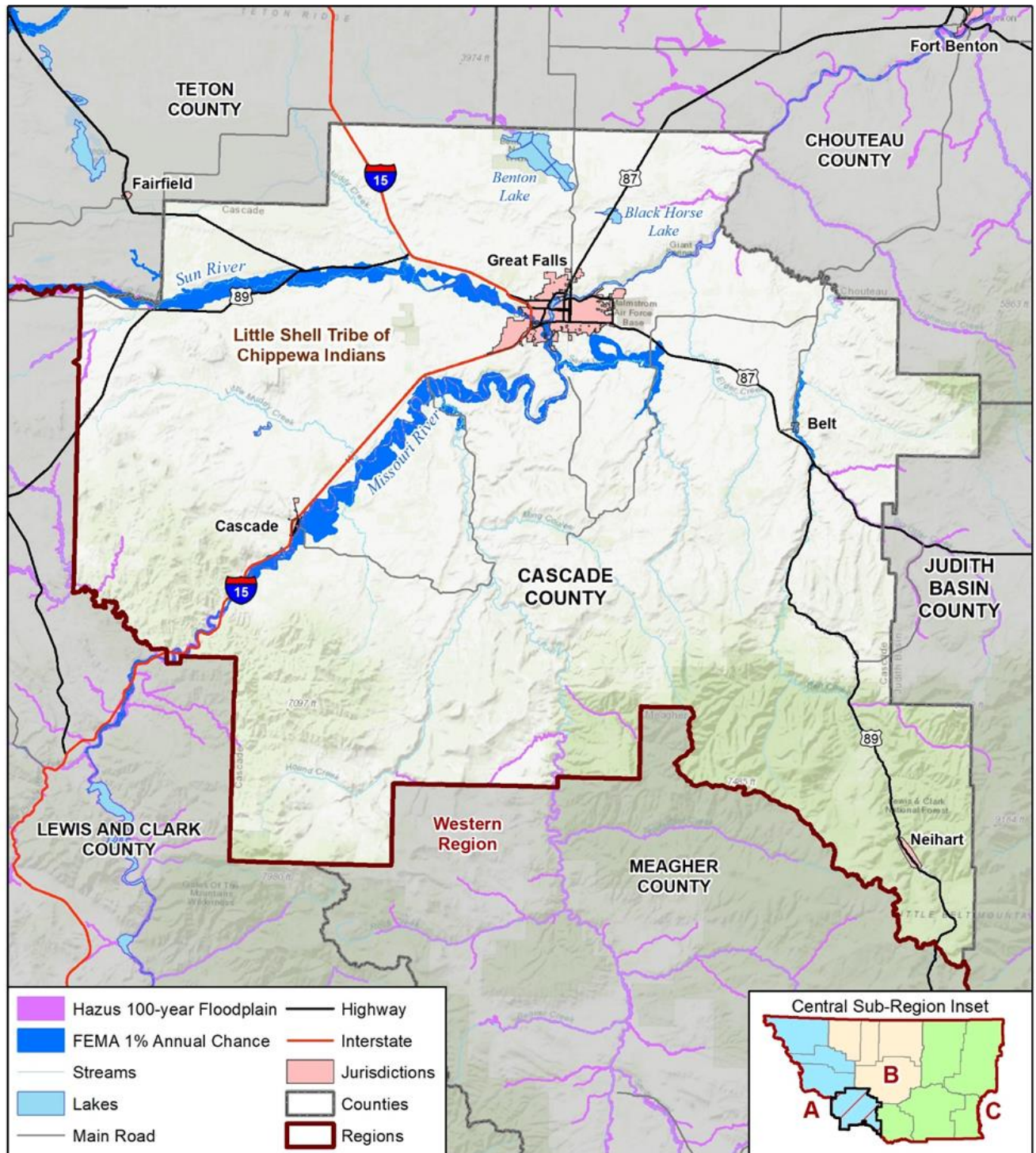
**Table C-14 Cascade County Critical Facilities at Risk to 1% Annual Chance Flood Hazards by FEMA Lifeline**

Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Materials	Health and Medical	Safety and Security	Transportation	Total
Belt	-	-	1	-	-	4	-	5
Great Falls	-	-	-	-	-	-	6	6
Cascade County	-	3	4	1	-	2	45	55
<b>Total</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>51</b>	<b>66</b>

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

All participating jurisdictions in Cascade County contain structures located in the floodplain, as seen in Figure C-11 through Figure C-15 below.

**Figure C-11 Cascade County Flood Hazard**

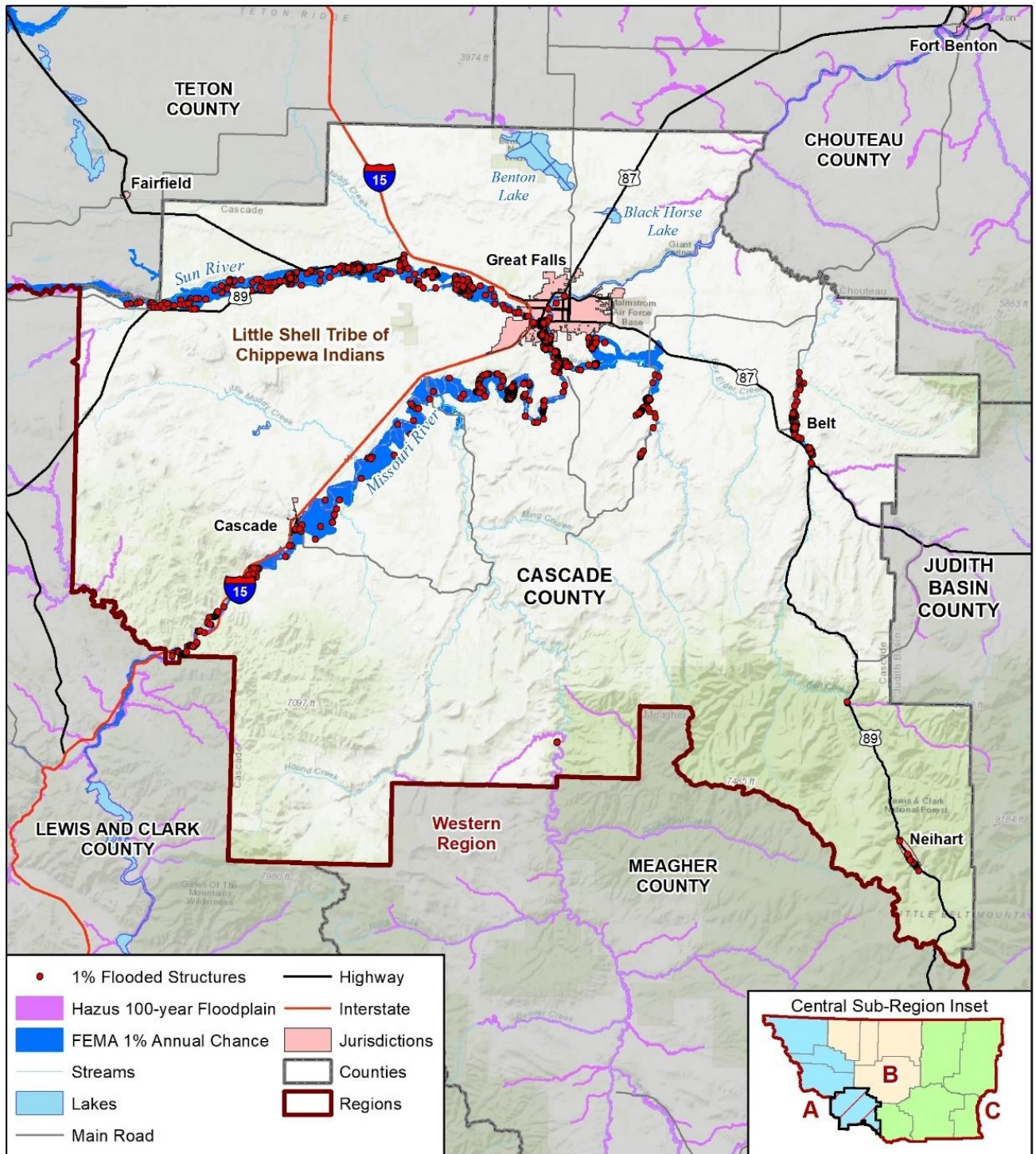


Map compiled 9/2022;  
intended for planning purposes only.  
Data Source: Montana State Library,  
DNRC, FEMA, Hazus

0 10 20 Miles



**Figure C-12 Cascade County Flood Hazard and Structures**

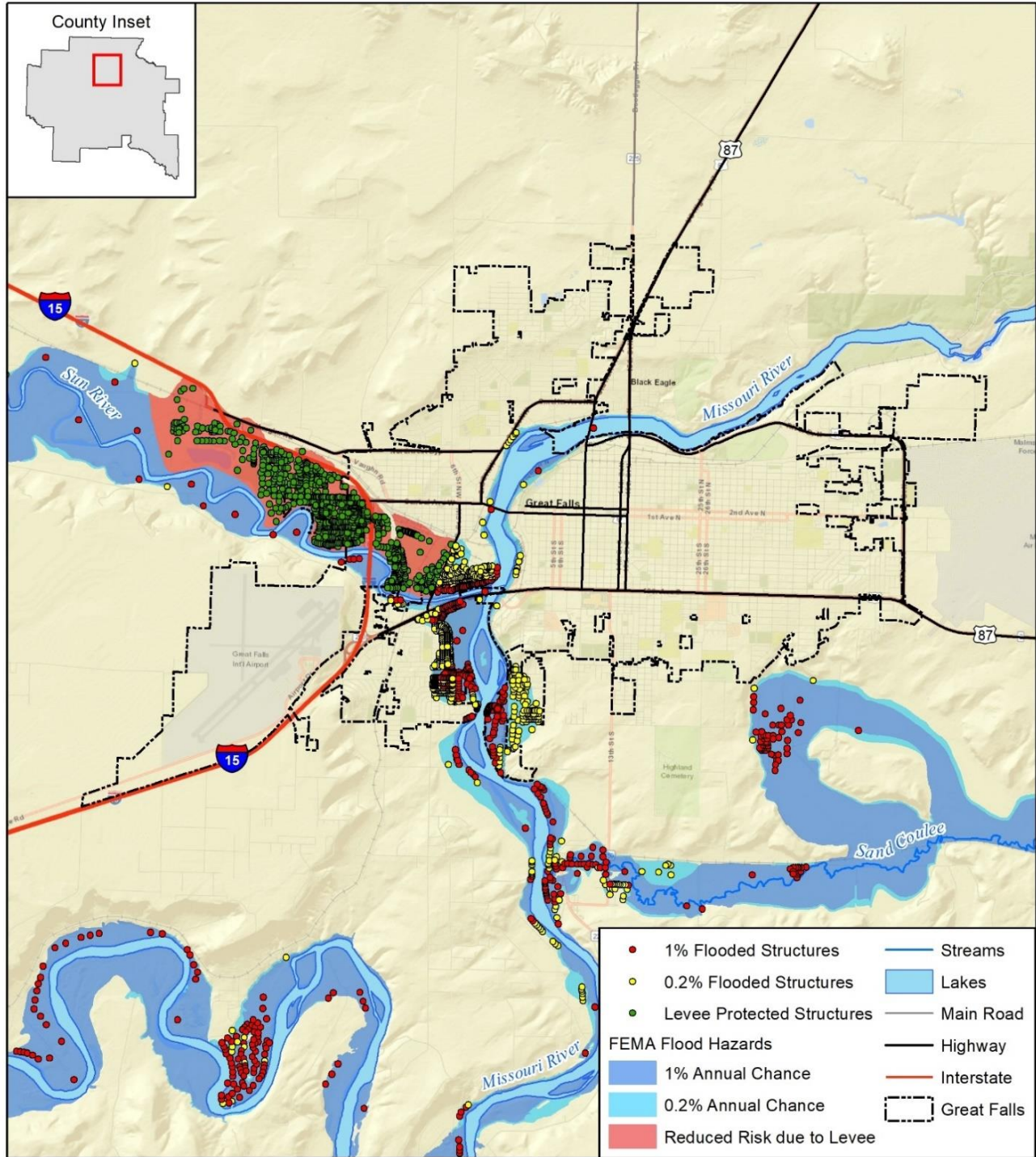


Map compiled 10/2022;  
intended for planning purposes only.  
Data Source: Montana State Library,  
DNRC, FEMA, Hazus

0 10 20 Miles



**Figure C-13 City of Great Falls Flood Hazard and Structures**

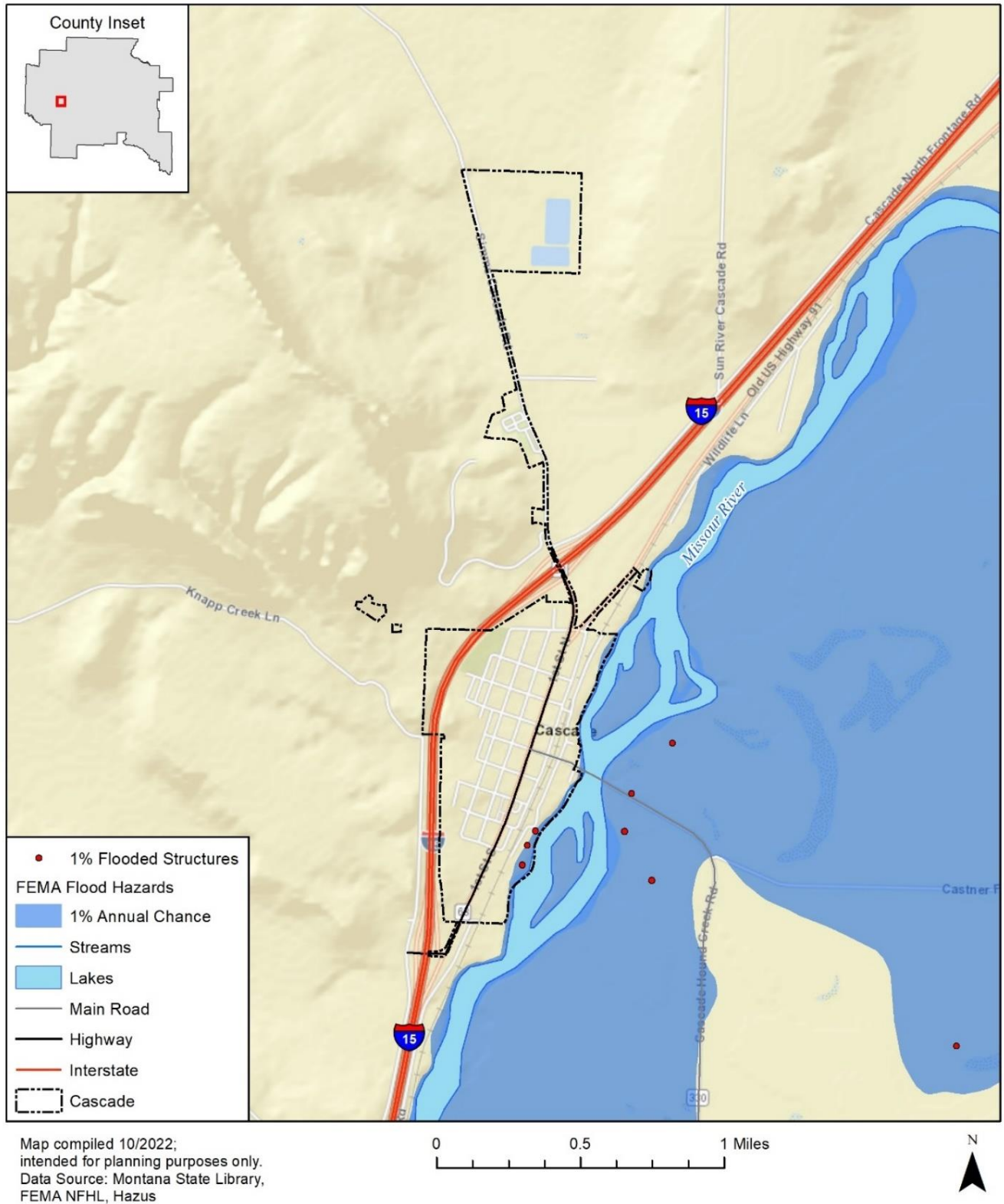


Map compiled 9/2022;  
intended for planning purposes only.  
Data Source: Montana State Library,  
FEMA NFHL, Hazus

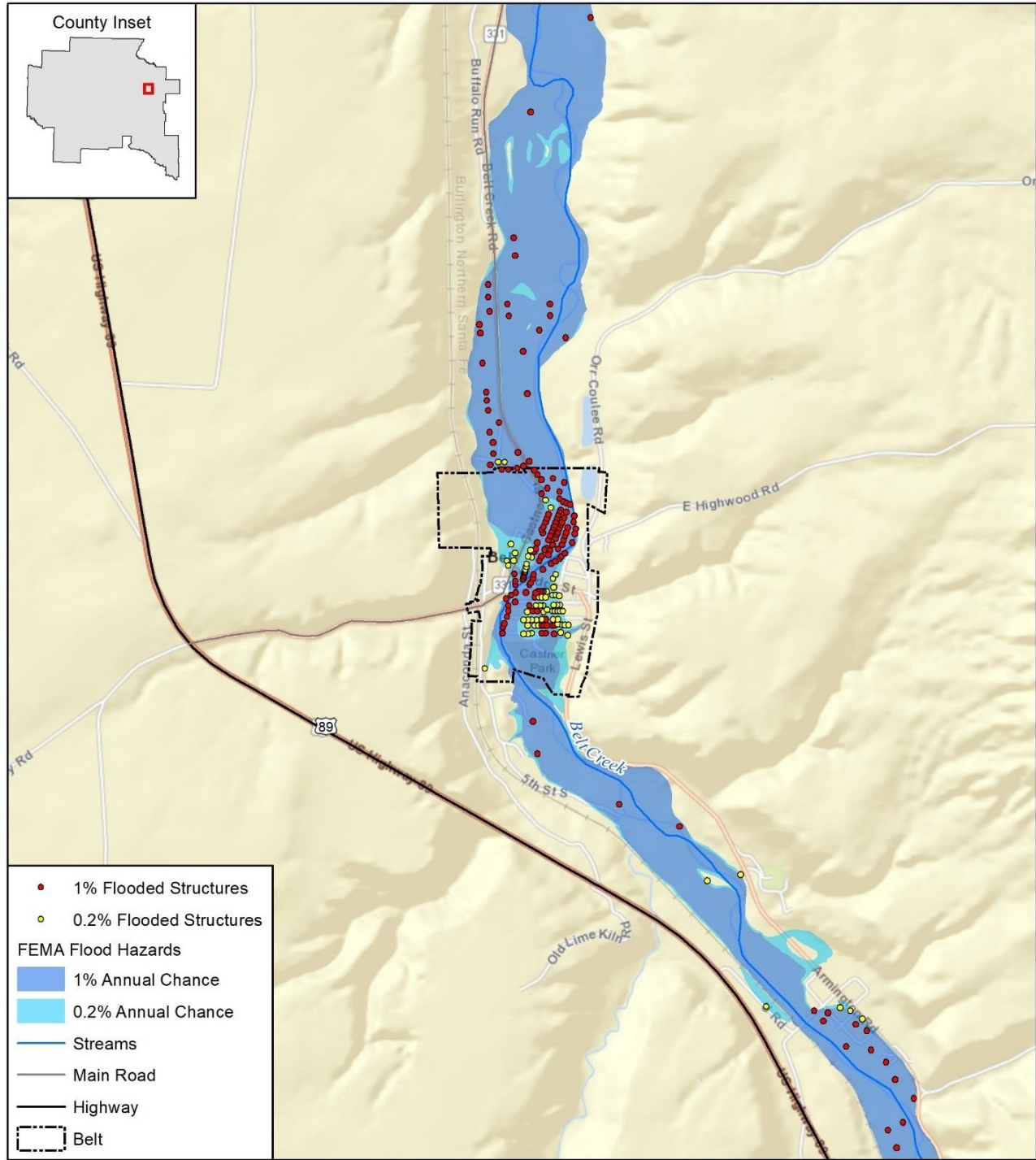
0 1 2 Miles



Figure C-14 Town of Cascade Flood Hazard and Structures



**Figure C-15 Town of Belt Flood Hazard and Structures**



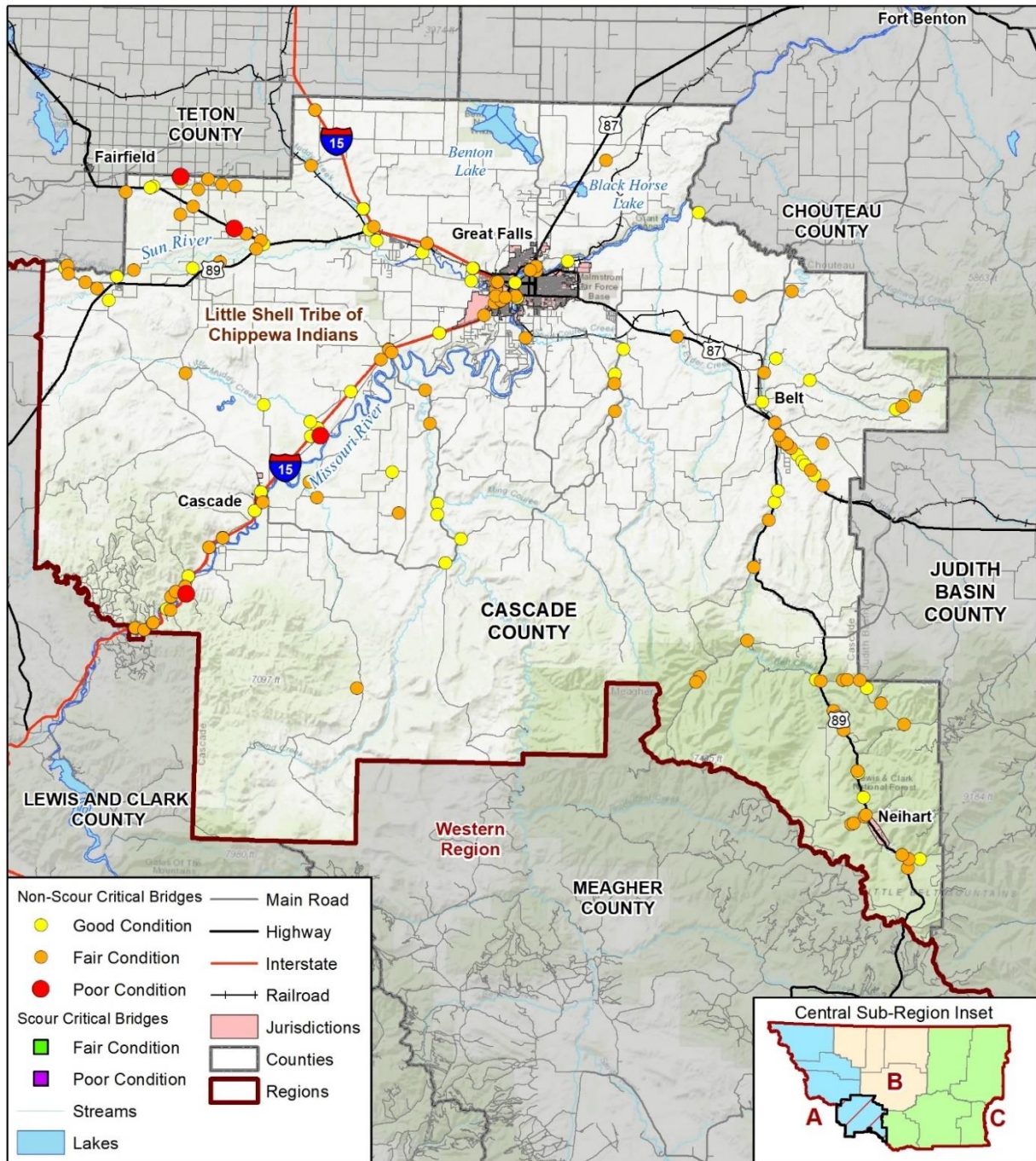
Map compiled 4/2023;  
intended for planning purposes only.  
Data Source: Montana State Library,  
FEMA NFHL, Hazus

0 0.5 1 Miles



The figure below displays the location of bridges in Cascade County and their condition. Refer to Chapter 4 for a discussion of the flood risk relative to Cascade County and the Central Region.

**Figure C-16 Cascade County Bridges**



Map compiled 10/2022;  
intended for planning purposes only.  
Data Source: Montana State Library,  
National Bridge Inventory



#### **C.4.7 Hazardous Materials Incident**

Cascade County has the highest overall ranking for hazardous materials incidents in the Central Region. Cascade has the highest amount of Risk Management Program (RMP) facilities, with a total of 4 facilities. Additionally, nearly 40% of all hazardous material incidents that have occurred in the Central Region since 1990 have been in Cascade County, with a total of 156 documented incidents. The highest concentration of hazardous material railways and transportation routes, including Interstate 15, are in Cascade County and are located near the most populous city in the County, the City of Great Falls. Hazardous liquid pipelines also run near the Town of Belt and pose a threat to the populations living in the area. (Source: [NPMS Public Viewer \(dot.gov\)](#))

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

#### **C.4.8 Landslide**

Landslides are ranked as a low overall significance hazard in Cascade County. There has only been one recorded instance of landslides in the County, therefore, annualized losses were found to be relatively low. There were no documented differences in landslide vulnerability between jurisdictions in Cascade County.

Refer to Chapter 4 for a discussion of the landslide risk relative to Cascade County and the Central Region.

#### **C.4.9 Severe Summer Weather**

Cascade County ranked severe summer weather as a medium overall significance hazard. Cascade County experienced the greatest number of recorded heavy rain and lightning events in the Central Region, and the third greatest number of recorded hail events. Property losses from severe summer weather in Cascade County totaled \$423,600 from 1955 to 2022 (16.4% of total losses in the Central Region), mainly due to hail events. While all property and people are equally vulnerable to severe summer weather events in the County, greatest property losses are likely to occur in the City of Great Falls, where people and infrastructure are concentrated.

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

#### **C.4.10 Severe Winter Weather**

Cascade County ranked severe winter weather as a high overall significance hazard. The Cascade Zone experienced the third greatest number of recorded severe winter weather events in the Central Region and the NRI Risk Index rated Cascade County as one of the two counties in the region with a “relatively high” risk index for winter weather.

Refer to Chapter 4 for a discussion of the severe winter weather risk relative to Cascade County and the Central Region.

#### **C.4.11 Human Conflict**

Human conflict is ranked as an overall medium significance for Cascade County, while all other counties in the Central Region are ranked as low. All 23 documented events in the Central Region were recorded in Cascade County, in the City of Great Falls. While all cities and towns are vulnerable to human conflict events, human conflict events tend to occur in populated areas such as the City of Great Falls.

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

### **C.4.12 Tornadoes & Windstorms**

Cascade County ranked tornadoes and windstorms as a high overall significance hazard. The Cascade Zone experienced the third greatest number of high wind and strong wind events in the Central Region, with 272 total events. Additionally, Cascade County experienced the greatest number of thunderstorm wind events and fourth greatest number of tornado events. The NRI ranked Cascade County as the highest risk index rating for tornadoes in the Central Region (however, it was ranked as relatively low), and one of the three highest ranked counties for strong wind. The Town of Belt Planning Team noted a microburst in 2020 that caused significant damage to trees in the area.

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

### **C.4.13 Transportation Accidents**

Cascade County ranked transportation accidents as an overall medium significance. Cascade County had the greatest number of wildlife crashes and the greatest number of roadway crashes in the Central Region. While transportation accidents can occur along any type of transportation route in the county and region, the presence of the BNSF Railway, the Great Falls International Airport, and several significant highways that run through the County contribute to the large number of transportation accidents in the County.

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

### **C.4.14 Volcanic Ash**

All counties in the Central Region and all jurisdictions within Cascade County ranked volcanic ash as an overall low significance hazard. All people and property in Cascade County have comparable vulnerability to the region as a whole.

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

### **C.4.15 Wildfire**

Cascade County ranked wildfire as a high significance hazard. Cascade County has the greatest number of individuals in high-risk areas, with a total of 4,377 people exposed (43.8% of the Central Region's exposure). Figure C-17 below displays the wildfire risk in Cascade County. While most of the County is at high risk of wildfire, the northern portion of the County is ranked as medium-low with areas of very high risk concentrated in the areas surrounding the City of Great Falls and on the southwest border of the County, near Lewis and Clark County.

The CPT also noted a wildland/WUI fire that occurred on December 1st, 2021, in the Gibson Flats area. Two animals, 11 homes, 7 outbuildings, and vehicles were damaged in the fire. The CPT believes that it is very possible for an event like this to happen again in the future due to high wind and dry conditions in the area. The Town of Cascade noted a wildland fire event, believed to have been caused by a lightning strike, in the summer of 2021. The fire resulted in significant crop damage, leaving cattle without alfa, in addition to road closures and displacement of families living in the area. The CPT noted that this event is likely to occur again in the event of a dry summer.

**Figure C-17 Cascade County Wildfire Hazard**

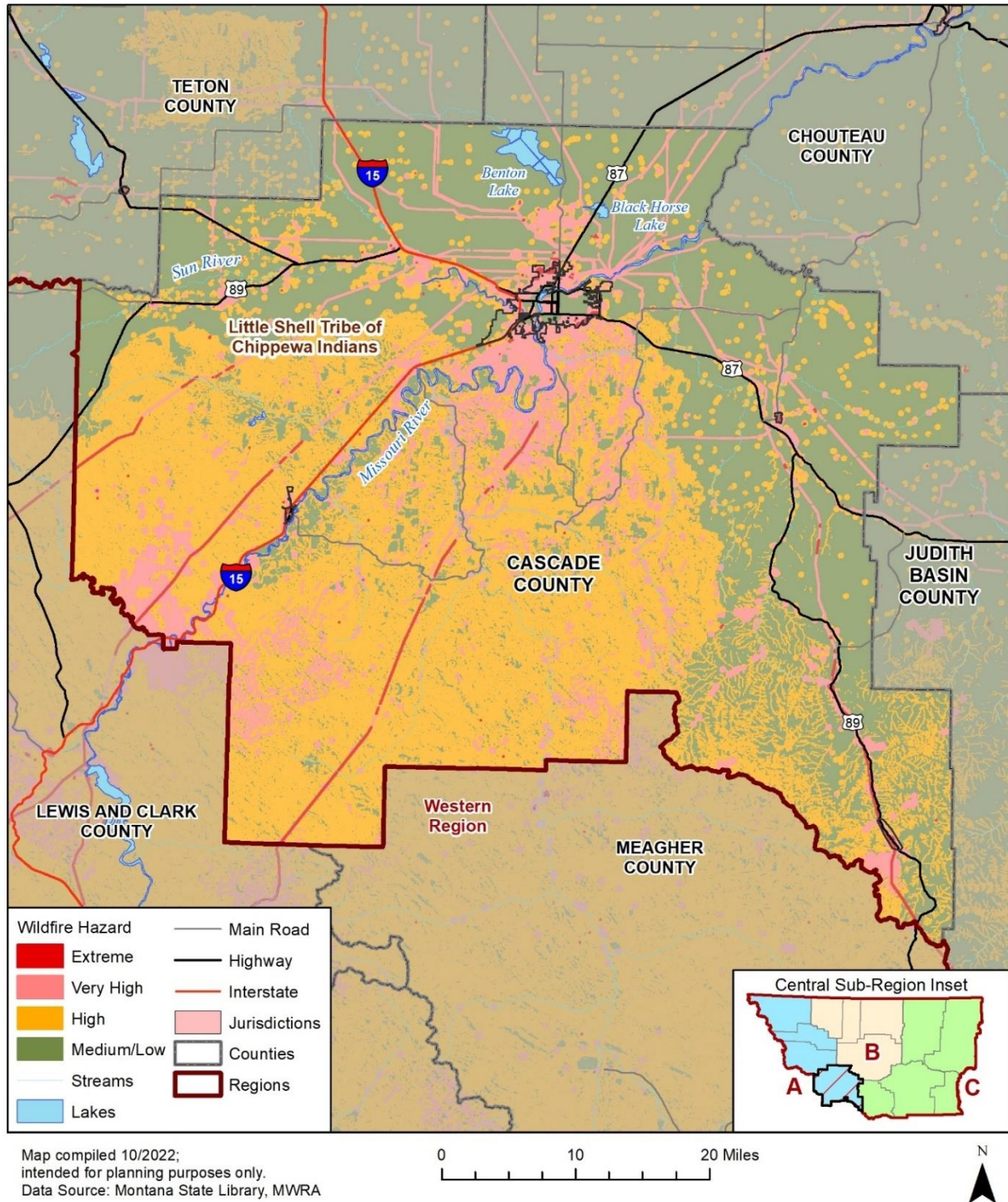


Table C-15 below summarizes the estimated exposed value of improvements in each wildfire risk category. Of the 3,409 properties at risk, 95% are residential and 2% are agricultural. Wildfires typically result in a total building loss, including contents. See Chapter 4 in the base plan for details on the methodology of this analysis.

**Table C-15 Cascade 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 <b>Extreme</b> Wildfire Hazards	Belt	196	\$21,319,238	\$11,532,067	\$32,851,305	423
	Cascade	103	\$12,153,358	\$6,318,372	\$18,471,730	232
	Great Falls	1,054	\$263,790,426	\$132,457,568	\$396,247,994	2,413
	Neihart	100	\$10,980,481	\$5,695,867	\$16,676,348	209
	Cascade County	83	\$11,381,885	\$6,488,672	\$17,870,557	161
	<b>Total</b>	<b>1,536</b>	<b>\$319,625,388</b>	<b>\$162,492,545</b>	<b>\$482,117,933</b>	<b>3,439</b>
At Risk to <b>Very High</b> Wildfire Hazards	Belt	58	\$7,373,890	\$3,858,215	\$11,232,105	129
	Cascade	221	\$35,917,639	\$21,776,870	\$57,694,509	469
	Great Falls	9,112	\$2,102,670,037	\$1,212,490,769	\$3,315,160,806	20,546
	Neihart	63	\$6,051,962	\$3,784,031	\$9,835,993	122
	Cascade County	5,696	\$1,043,724,941	\$553,931,549	\$1,597,656,490	12,537
	<b>Total</b>	<b>15,150</b>	<b>\$3,195,738,469</b>	<b>\$1,795,841,433</b>	<b>\$4,991,579,902</b>	<b>33,803</b>
At Risk to <b>High</b> Wildfire Hazards	Great Falls	338	\$237,904,136	\$191,560,435	\$429,464,571	660
	Cascade County	2,071	\$536,549,279	\$336,797,712	\$873,346,991	3,717
	<b>Total</b>	<b>2,409</b>	<b>\$774,453,415</b>	<b>\$528,358,146</b>	<b>\$1,302,811,561</b>	<b>4,377</b>

Source: MSDI 2022, MWRA

Table C-16 summarizes the potential impact of wildfire on critical facilities and lifelines in Cascade County and its associated jurisdictions. The table highlights the type and number of facilities in each jurisdiction in the County that are in Low/Moderate, High, Very High, or Extreme Wildfire risk areas. See Chapter 4 for the methodology of the critical facilities at risk analysis.

**Table C-16 Cascade County 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
	Cascade	-	-	1	-	-	2	-	<b>3</b>
	Great Falls	2	-	-	-	-	-	-	<b>2</b>

At Risk Rating	Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Total
	Neihart	-	-	-	-	-	1	1	2
	Cascade County	26	2	-	-	-	1	3	32
	<b>Total</b>	<b>28</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>5</b>	<b>46</b>
At Risk to <b>Very High</b> Wildfire Hazards	Cascade	2	-	-	1	-	2	2	7
	Great Falls	52	41	8	-	4	22	59	186
	Cascade County	19	1	3	1	2	30	4	60
	<b>Total</b>	<b>73</b>	<b>42</b>	<b>11</b>	<b>2</b>	<b>6</b>	<b>54</b>	<b>65</b>	<b>253</b>
At Risk to <b>High</b> Wildfire Hazards	Great Falls	5	-	1	-	3	4	5	18
	Cascade County	8	1	3	2	-	3	50	67
	<b>Total</b>	<b>13</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>55</b>	<b>85</b>
At Risk to <b>Medium/Low</b> Wildfire Hazards	Great Falls	43	2	8	6	5	52	14	130
	Cascade County	8	7	28	1	-	9	52	105
	<b>Total</b>	<b>51</b>	<b>9</b>	<b>36</b>	<b>7</b>	<b>5</b>	<b>61</b>	<b>66</b>	<b>235</b>

Source: HIFLD 2022, MT DES, NBI, MWRA

## C.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.

### C.5.1 Regulatory Mitigation Capabilities

Table C-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 Central Region and each participating jurisdiction.

**Table C-17 Cascade County and Jurisdictions Regulatory Mitigation Capabilities**

Plans and Regulations	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Building Codes	No. MT Dept. of Labor & Industry – Building Codes Bureau. State Building Inspector for County	Yes	No	No	No
Building Codes Year	N/A	2018 IBC	N/A	N/A	N/A
BCEGS Rating	N/A	N/A	N/A	N/A	N/A
Capital Improvements Program (CIP) or Plan	Yes	Yes	Yes	Yes	Yes
Community Rating System (CRS)	Yes Class 8	Yes Class 7	Yes Class 8	No	No
Community Wildfire Protection Plan (CWPP)	Yes, Cascade County CWPP 2008	No	No	No	Yes
Comprehensive, Master, or General Plan	Yes, Cascade County Growth Policy (last update 2014)	Yes, Downtown Master Plan & Medical District Master Plan	No	Yes, the Town of Cascade Growth Policy (2019)	Yes
Economic Development Plan	No	Yes, City of Great Falls (CoGF) Growth Policy	No	No	Yes
Elevation Certificates	Yes, required by CRS	Yes	Yes	No	No
Emergency Operations Plan (EOP)	Yes, 2022	Yes, Cascade County & CoGF maintain the EOP	Yes	Yes	No
Erosion/Sediment Control Program	No, MDEQ	Yes, CoGF Ordinance – Title 15, Chapter 48	No	No	No
Floodplain Management Plan	Yes, Cascade County Floodplain Regulations (last updated 2013); Multi-Hazard Mitigation Plan	Yes	Yes	No	Yes
Flood Insurance Study	Yes, Cascade County FIS and FIRM Panels (eff. March 19, 2013)	Yes	Yes	No	Yes
Floodplain Management Ordinance	Yes – CWPP, Cascade County Floodplain Regulations	Yes - Code of Ordinances: 17.56.1.010 - Floodplain Hazard Management Regulations	Yes	Yes	Yes

Plans and Regulations	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
National Flood Insurance Program (NFIP) Participant	Yes – 04/15/80	Yes – 09/30/77	Yes – 12/05/79	Yes – 06/19/13	Yes – 03/19/13
Growth Management Ordinance or Policy	Yes, Cascade County Growth Policy (last update 2014)	Yes	Yes, Town of Belt Growth Policy 2019	Yes, the Town of Cascade Growth Policy (2019)	No
Other Hazard-Specific Ordinance or Plan (Steep Slope, Wildfire)	Yes	Yes	Yes	No	Yes
Site Plan Review Requirements	Yes, Planning Department (land uses) and Health Department (WWTS/PWS)	Yes	No	No	No
Stormwater Program, Plan, or Ordinance	Yes, Storm Water Management Plan (last updated December 16, 2019) – MS4 Coordinator	Yes	No	Yes, updated through the CIP	No
Zoning Code or Ordinance	Yes, Cascade County Zoning Regulations (last updated December 28, 2021, by Res. #21-79)	Yes	In Progress, not yet implemented. Draft completed 6/2022	Yes	No
Other?	Yes, THIRA, Cascade County Subdivision Regulations, Cascade County Regulations for Subsurface Wastewater Treatment Systems, Joint Land Use Study/Plan w/Malmstrom AFB			Tree Ordinance, Master Forestry Plan	

### Discussion on Existing Regulatory Mitigation Capabilities

The CPT noted that the City of Great Falls has a Title 17 “Land Development Code”, which implements Growth Policy, establishes regulations that controls the use or development of land in the City, provides standards and regulations of proposed development in the city and safeguards public health, safety, and general welfare by establishment of standards for design and development. The City of Great Falls also adopts the most recent edition of building codes that the State of Montana mandates. The CPT also explained that the Town of Belt is undergoing the planning process for their first zoning and subdivision regulation and ordinances. A draft of the plan was completed in June of 2022 and will be implemented once complete.

### Discussion on NFIP Participation and Compliance

The Cascade County Planning Department is responsible for floodplain management and administration. The Planning Director, who is also the Floodplain Administrator administrator, enforces the requirements of the NFIP. The County intends to continue to comply with the NFIP. The CPT identified some challenges with implementing the NFIP in Cascade County include politics, lack of qualified individuals to oversee projects, lack of dedicated floodplain managers who are qualified to fulfill all responsibilities of the NFIP, including program outreach and education. The Town of Belt noted that limited personnel and funding are challenges

for them, but they are pursuing an agreement with Cascade County for assistance. A big challenge in the county is citizens living in flood prone areas that refuse to submit land use applications and do not have the financial capacity to hire professionals for their projects, and in turn do not ask permission before they act.

Cascade County implements the substantial improvement/substantial damage provisions of the floodplain management regulations after a flooding event. The County Floodplain Administrator/Planning Director sends out initial Substantial Damage letters if a community disaster results in destroyed structures. The zoning permits also involve a floodplain check, resulting in the Department flagging and withholding zoning permits before a floodplain permit is issued. Zoning permits are required for alterations of existing structures, which flags properties/structures where improvements to nonconforming floodplain structures is proposed. At that point, a Floodplain Permit is required before any work can be started.

The City of Great Falls participates in the NFIP. The City of Great Falls CPT noted that the City Planning Division of Planning & Community Development is the primary responsible department dealing with floodplain management. Currently, a planner performs the floodplain administrator role. The City of Great Falls fully intends to continue NFIP compliance. After a flood event, it is the role of the floodplain administrator to review and assess damaged structures. Substantial improvement/substantial damage occurs when the cost of restoring a structure exceeds 50 percent of its market value before damage occurred. If it is determined substantial improvement/substantial damage has occurred, those structures must be brought up to current floodplain management standards.

The Town of Cascade does intend to continue to comply with NFIP requirements. The Town Clerk functions as the floodplain administrator. However, the CPT noted that there isn't an accurate floodplain map for the Cascade area.

### C.5.2 Administrative and Technical Mitigation Capabilities

The table below identifies the County and participating jurisdictions personnel responsible for activities related to mitigation and loss prevention in Cascade County.

**Table C-18 Cascade County Jurisdictions Administrative/Technical Mitigation Capabilities**

Administrative and Technical	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Emergency Manager	Yes	Yes	No	Yes, the Town Mayor	Yes
Floodplain Administrator/Position/Department	Yes, Planner Director, County Planning Department	Yes, City Planner, City Planning Division of Planning & Community Development	Yes	Yes, Town Clerk, Town Hall	Yes
Community Planning:	Yes, Planning Director	Yes	No	Yes, Planning Board	No
- Planner/Engineer (Land Development)	Yes, 3 General Planners on Staff	Yes	Yes, Land Solution	No	Yes
- Planner/Engineer/Scientist (Natural Hazards)	Yes, 3 General Planners on Staff	Yes	No	No	Yes



Administrative and Technical	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
- Engineer/Professional (Construction)	Yes, 3 General Planners on Staff	Yes	Yes, Gieut West	No	Yes
- Resiliency Planner	Yes, 3 General Planners on Staff	No	No	No	No
- Transportation Planner	N/A, PW Road & Bridge Division	Yes	No	No	No
Full-Time Building Official	No	Yes	No	No	No
GIS Specialist and Capability	Yes,	Yes	No	No	No
Grant Manager, Writer, or Specialist	Yes, does not write grants	Yes	No	Yes	No
Housing Authority	No	Yes	No	No	No
Warning Systems: (list the hazards each system is used for)	Yes, CODE Red	Yes	Yes	Yes	Yes
- Sirens	No	Yes	No	Yes	Yes
- Reverse 911	Yes	Yes	Yes	No	Yes
- IPAWS/Wireless Emergency Alerts (WEA)	Yes, IPAWS	Yes	Yes	No	Yes
- Opt-In Notifications (CodeRed, Everbridge, etc.)	Yes, Code Red	Yes	No	Yes	No
- Other system				Yes, Pager System & Active 911	

### C.5.3 Financial Capabilities

The table below 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 C-19 Cascade County Jurisdictions Financial Capabilities**

Financial Capabilities	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Ability to fund projects through Capital Improvements funding	No	Yes	Yes	Yes, used every year and updated annually	No
Ability to incur debt through general obligation bonds	Yes	Yes	Yes	Yes	No
Ability to incur debt through private activities	Yes	Yes	Yes	Yes	No
Ability to incur debt through special tax bonds	Yes	Yes	Yes	Yes	No

Financial Capabilities	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Authority to levy taxes for a specific purpose with voter approval	Yes	Yes	Yes	Yes, the permissive levy for health insurance	No
Authority to withhold spending in hazard prone areas	Yes	Yes	Yes	Unknown	No
Community Development Block Grants	Yes	Yes	Yes	Yes, applying now	No
FEMA Hazard Mitigation Assistance grants	Yes	Yes	No	Yes	No
FEMA Public Assistance funds	Yes	Yes	No	Yes	No
Stormwater Service Fees	No	Yes	No		No
System Development Fee	No	Yes	No	Yes	No
Utility fees (water, sewer, gas, electric, etc.)	No	Yes	Yes	Yes	No
Gas Tax/BaRSAA (Roads and Streets)	No	No	No	Yes	Yes
Montana Coal Endowment Program (MCEP)	No	No	No	Yes	Yes
State Revolving Fund	No	No	No	Yes	Yes
Department of Natural Resources & Conservation	No	No	No	Yes	Yes

The CPT noted that City of Great Falls does oftentimes deal with staffing and financial limitations as the city's tax base does not match the tax base in comparable cities in Montana. Additionally, Great Falls has lost human resources with regard to preparedness training with turnover of staff that have moved away from the area. The Town of Belt also noted that limited funding is a challenge for them, but they are working with Cascade County to receive assistance.

Several success stories were shared by the CPT. The Great Falls Fire Rescue forms one of six Regional Hazmat Teams in Montana and utilizes grant funding for specialty equipment and training. Great Falls Fire Rescue (GFFR) was able to send two team members to training to become Hazmat Incident Safety Officers. Gibson Flats Fire prompted GFFR to organize and host the first Rural Fire Academy during Spring of 2022. The Academy was successful and will be held twice a year to involve GFFR, surrounding volunteer fire departments and military fire departments. As stated before, GFFR has implemented its Community Risk Reduction Program to identify hazards specific to Great Falls, develop strategies to mitigate the hazards and assess the mitigation efforts. The City of Great Falls also noted that Family Connections has secured a grant related to emergency childcare needs to launch pop up childcare centers during emergency or disaster events.

The CPT also noted that the concerns with residential development in wildland areas in the Town of Cascade, increasing vulnerable homes in the WUI. One way the town has mitigated the potential threat of fires near residential homes in the WUI is having the town volunteer fire department works closely with the rural fire department and Town Clerk to secure grant funding for gear and other safety equipment. Items are budgeted each year for replacement.

## 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).

The HMGP provides a notice of funding availability in June with applications due in October/November of each year. It is important to note that the HMGP is also dependent on federally declared disasters within the State and funding amount is based on a percentage of disaster relief costs. 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. Cascade County and its jurisdictions have participated in several of these hazard mitigation assistance projects, summarized in the table below.

**Table C-20 Cascade County Hazard Mitigation Assistance-Funded Projects**

Program	Date Approved	Project Type	Status	Recipient
HMGP	2022-09-12	400.1: Utility Protective Measures (Electric, Gas, etc.)	Approved	Great Falls
BRIC	2020-12-17	401.1: Water and Sanitary Sewer System Protective Measures	Obligated	City of Great Falls
HMGP	2019-04-10	202.1: Elevation of Private Structures - Riverine	Closed	Cascade County
PDM	2016-02-11	91.1: Local Multihazard Mitigation Plan	Closed	Cascade County
PDM	2010-09-15	91.1: Local Multihazard Mitigation Plan	Closed	Cascade County
HMGP	1998-12-10	301.1: Shoreline Stabilization (Riprap, etc.)	Closed	Cascade County

Source: FEMA OpenData

## C.5.4 Education and Outreach Capabilities

Table C-21 below summarizes the existing education and outreach capabilities available to Cascade County and its jurisdictions.

**Table C-21 Cascade County Education and Outreach Capabilities**

Education & Outreach Programs	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Ongoing public education programs (fire safety, responsible water)	Yes, CRS – Flood hazard outreach annually. Cascade Conservation District – Rain barrel class +	Yes	No	Yes	No

Education & Outreach Programs	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
use, household preparedness, etc.)	MSU Ext – Drought Tolerant Plant				
Local citizen groups that communicate hazard risks	Yes	Yes	No, neighborhood watch	Yes	No
Firewise or other fire mitigation program	Yes	Yes	Yes	No	Yes
National Weather Service StormReady	Yes	Yes	No	No	No
Other				CodeRed & public education on trees to remove & replace hazardous trees	

The CPT noted that COVID-19 redirected agencies to increase their focus on hazard prevention to education rather than enforcement. Seeing the negative feedback locally, statewide, and nationally to enforcement measures has emphasized the need to educate and train. City of Great Falls has had local government put requests in for American Rescue Plan Act of 2021 (ARPA) and local agencies have applied for the Community Block Grant Program for funding to be used specifically for prevention of preparation for and response to Coronavirus. Jurisdictions in the County also noted that they would like more education and outreach to the community but rely on outside resources due to staffing limitations.

The City of Great Falls also does community outreach and provides homeowners with information about flood mitigation techniques. City Emergency Management has developed a communication package for city and county agencies to utilize for reverse 911 in the form of CodeRED system.

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

Table C-22 shows the local chapters partnered with the County and participating jurisdictions. The West Great Falls Flood Control & Drainage District (WGFFCDD) was created by the Montana Eighth Judicial District Court to cooperate with the Federal government for construction, preservation, protection, and keeping in repair the (west) Great Falls, Montana Flood Protection Project. The WGFFCDD serves as the non-Federal Local Sponsor for the Project designed, engineered, constructed, and annually inspected by the U.S. Army Corps of Engineers

**Table C-22 Cascade County Non-Governmental Organizations (NGOs)**

Non-Governmental Organizations (NGOs)	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
American Red Cross	Yes	Yes	No	Yes	Yes
Chamber of Commerce	Yes	Yes	Yes	No	No
Community Organizations (Lions, Kiwanis, etc.)	Yes	Yes	No	Yes, Lions, American Legion, Girl Scouts, Eastern Star, Masonic Lodge	No

Non-Governmental Organizations (NGOs)	Cascade County	City of Great Falls	Town of Belt	Town of Cascade	Town of Neihart
Environmental Groups	Yes, Sierra Club Montana; Upper Missouri Breaks Audubon; Nature Conservancy in Montana; Wild Montana; The Wildlife Society	Yes	No	No	No
Homeowner Associations	Yes	Yes	No	Yes	No
Neighborhood Associations	Yes	Yes	No	No	No
Salvation Army	Yes	Yes	No	No	Yes
Veterans Groups	Yes	Yes	VFW Chapter	Yes, American Legion	No
Other	Sun River Ditch Company		Senior Citizen Center		

### C.5.6 Opportunities for Enhancement

Based on the capabilities assessment, Cascade County has several existing mechanisms in place that already help to 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 best to integrate hazard information and mitigation projects into their departments. Continuing to train staff on mitigation and the hazards that pose a risk to Cascade 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 or becoming Firewise and StormReady communities 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:

#### Cascade County:

- Consider improving rating in the CRS (currently Class 8) to lower the cost of flood insurance through enhanced floodplain management and flood loss reduction activities
- Update the CWPP
- Consider adopting building codes to improve structure resilience to hazards
- Additional partnerships with area agencies to further develop hazard mitigation programs.

#### City of Great Falls:

- Consider adopting a Wildland Urban Interface Code (see recommendation in 2022 CWPP)
- Increase City Fire (GFFR) staffing and stations to meet response standards set by NFPA and ISO rating by Safety Levy.

## Town of Belt:

- Consider adopting building codes.
- Formally adopt a zoning code to protect communities and businesses from unregulated growth.
- Recover compliance with the National Flood Insurance Program. (Community Status book indicates on probation as of Jan 30, 2023)

## Town of Cascade:

- Consider adopting building codes.
- Consider creating a designated public tornado shelter/saferoom for the community.

## Town of Neihart:

- Consider adopting building codes.
- Work to increase public awareness of potential hazards and mitigation actions they should take through education outreach programs.

## C.6 Mitigation Strategy

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

### C.6.1 Goals

During the creation of the 2023 Regional Plan, the counties in the Montana Central 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.

### C.6.2 Progress on Previous Actions

During the 2023 planning process, the Cascade County Planning Team reviewed all the mitigation actions from the 2017 plan. Of the 71 mitigation actions from 2017, 70 are in progress or are implemented annually, demonstrating ongoing progress, and building the community's resiliency to disasters. Sixteen were noted as being not started and one was combined with another action, as shown in Table C-23. During the planning process, nine new mitigation actions were created in Cascade County.

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

2017 ID	Mitigation Action	Hazards Mitigated	Jurisdiction	Status/Implementation Notes
6.4.8	Update the stormwater system in the Town of Cascade.	Flooding	Town of Cascade	Combined with another action

### C.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.

### C.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 Cascade County and its jurisdictions. The process used to identify, develop, and prioritize these actions is described in Chapter 5 of the base plan. A total of six new mitigation actions were added to the 69 actions carried over from the 2017 HMP.

Table C-24 represents Cascade County's Mitigation Action and Plan. 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, 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
- Annual Implementation: 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 2017 Plan; little to no work has been completed.
- In Progress: project is carried over from the 2017 Plan; work has begun on the project and is proceeding.
- Annual: project is carried over from the 2017 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 C-24 below lists the mitigation actions for each participating jurisdiction in Cascade County. All jurisdictions have developed mitigation actions for each applicable hazard in the HMP.

**Table C-24 Cascade County Mitigation Action Plan**

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
1	Identify and secure a back-up location for the dispatch center.	Multi: Com. Disease, Cyber, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	High	Local budget	Medium Term	High	In Progress. Alternate location has been identified, however room for improvement, identification for another location is in the works
2	Encourage public to engage in Volunteer Organizations Active in Disaster.	Multi: Com. Disease, Cyber, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Cascade County Fire Department	Low	Local budget	Annual Implementation	High	Annual. Was robust during COVID, needs to begin again
3	Conduct public outreach campaign where special needs residents would provide information on where they live and what they need. Develop database with this information.	Multi: Com. Disease, Cyber, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Red Cross, Department of Health and Human Services	Moderate	Local budget	Annual Implementation	High	Not Started. GFFR Community Connect for the City – implementation Spring 2023
4	Provide NOAA weather and radios to all schools and critical facilities.	Multi: Dam Failure, Drought, Earthquake, Flooding, Landslide, Summer Weather, Winter Weather, Tornado/ Wind, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Public Schools	Moderate	County, NWS, FEMA HMA grants	Annual Implementation	Medium	In Progress.



ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
5	Update list of emergency shelter locations in each community	Multi: Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Public Schools, Churches	Little to no cost	Local budget	Annual Implementation	Medium	In Progress. Red Cross, CCHD and LEPC
6	Obtain generators for emergency shelters.	Multi: Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Wed Board	Moderate	FEMA HMA grants, GSA, Facility Owner	Long Term	Low	Not Started. Monitor grant opportunities
7	Continue to aggressively address rural locations within the county so people's residences can be found for rescue purposes.	Multi: Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County	County OEM, Planning	Moderate	County	Annual Implementation	High	Not Started.
8	Provide shelter-in-place training to the public.	Multi: Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, CCSO	Moderate	Local budget	Annual Implementation	High	In Progress. Part of CodeRED Public Info Campaign

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
9	Perform public outreach/ education of locations of emergency shelters	Multi: Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/ Wind, Transp. Accident, Volcanic Ash, Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Cascade County Sheriff's Office	Low	Local budget	Medium Term	Medium	In Progress.
10	Install windows with shatter proof glass at new schools and critical facilities and upgrade windows at existing facilities during regular maintenance.	Multi: Summer Weather, Winter Weather, Tornado/ Wind	Cascade County, Great Falls, Belt, Cascade, Neihart	Cascade County OE, Weds Estate, Community Schools, Cascade County Sheriff's Office	Moderate	FEMA, County, Schools, Homeland Security	Long Term	Low	Not Started.
11	Promote National Weather Service's severe weather spotter training program.	Multi: Flooding, Summer Weather, Winter Weather, Tornado/ Wind	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Low	NWS, County	Annual Implementation	Medium	Not Started.
12	Support Public Health Department's public education programs on communicable disease.	Communicable Disease	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Public Health Department	Moderate	Local budget	Annual Implementation	Medium	Annual. GFFR and CCHD host community flu shot and covid clinics
13	Promote immunizations and disseminate information.	Communicable Disease	Cascade County, Great Falls, Belt, Cascade, Neihart	Department of Public Health and Human Services	Moderate	Local budget	Annual Implementation	High	Annual. Social media and Key Surveillance Partner sharing
14	Promote active surveillance between Public Health and healthcare providers.	Communicable Disease	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Public Health Department	Moderate	Local budget	Annual Implementation	High	Annual. Monthly Epi Surveillance meetings
15	Conduct vulnerability assessment of critical cyber infrastructure.	Cyber-Attack	Cascade County, Great Falls	Montana Municipal Interlocal Authority	Moderate	Local budget	Short Term	High	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
16	Conduct external security audit of fire walls on networks.	Cyber-Attack	Cascade County, Great Falls	Vision Net	Moderate	Local budget, DHS Grants	Short Term	High	In Progress.
17	Expand access to controls that check computers to enhance security.	Cyber-Attack	Cascade County, Great Falls	County OEM, City of Great Falls Administration	Moderate	Local budget, DHS Grants, Homeland Security	Short Term	High	Annual.
18	Require training for employees and local organizations on cyber security.	Cyber-Attack	Cascade County, Great Falls	Montana Municipal Interlocal Authority, Beazley	Low	Local budget	Annual Implementation	High	Annual.
19	Perform cyber mapping for planning and vulnerability mitigation.	Cyber-Attack	Cascade County, Great Falls	County OEM, City of Great Falls Administration	Moderate	Local budget, Homeland Security	Short Term	High	Annual.
20	Conduct public outreach/education with residents living in inundation areas.	Dam Failure	Cascade County, Great Falls, Cascade	County OEM, City and Town Administration	Moderate	Local budget	Annual Implementation	Medium	Annual. Posted on City Website under planning
21	Support drought programs implemented through the Conservation District, FSA, and MSU extension.	Drought	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Conservation District, FSA, and MSU	Moderate	County. Conservation District	Annual Implementation	Medium	Not Started.
22	Implement projects from Conservation District's drought planning process.	Drought	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration and Planning Departments	Moderate	BOR WaterSmart Grants	Long Term	Medium	Not Started.
23	Encourage utility companies to bury power lines where interruption of service is frequent	Drought	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Moderate	County, Utility Companies	Long Term	Medium	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
24	Re-certify the West Great Falls and Vaughn levees.	Flooding	Cascade County, Great Falls	Levee District	High	Levee Districts, Property stakeholders	Short Term	High	In Progress.
25	Educate homeowners on the advantages of purchasing flood insurance through the National Flood Insurance Program.	Flooding	Cascade County, Great Falls, Belt, Cascade, Neihart	County and City, Town Floodplain Administrators	Low	Local budget	Annual Implementation	Medium	Annual.
26	Work towards achieving a lower rating through the National Flood Insurance Program Community Rating System.	Flooding	Cascade County, Great Falls, Belt, Cascade, Neihart	County and City, Town Floodplain Administrators	Moderate	Local budget	Annual Implementation	Medium	Annual. Posted on City Website under planning
27	Participate in the National Weather Service's Flood Awareness program	Flooding	Cascade County, Great Falls, Belt, Cascade, Neihart	County and City, Town Floodplain Administrators	Low	Local budget, NWS	Annual Implementation	High	Annual. Public Info sharing during spring annually
28	Provide awareness training to repetitive loss property owners (and others) on mitigation programs to relocate, elevate, and floodproof structures in the floodplain.	Flooding	Cascade County, Great Falls, Belt, Cascade, Neihart	County and City, Town Floodplain Administrators	Low	DNRC, FEMA HMA grants	Annual Implementation	High	Annual. Posted on City Website under planning
29	Obtain river gauges for 6th Street SW bridge in Great Falls, in the town of Sun River, and elsewhere as needed.	Flooding	Cascade County, Great Falls	County and City, Town Floodplain Administrators	Moderate	USGS, DNRC, Local budget	Medium Term	Medium	In Progress.
30	As needed, remove woody vegetation from the edge of the county's levee and dikes.	Flooding	Cascade County, Great Falls, Belt	County and City, Town Floodplain Administrators	Moderate	FEMA HMA grants, Local budget	Annual Implementation	Medium	Annual. West GF Flood Control & Drainage District
31	Remove debris from floodways	Flooding	Cascade County, Great Falls, Belt, Cascade, Neihart	County Public Works	Moderate	FEMA HMA grants, Local budget, MDT	Annual Implementation	High	In Progress. West GF Flood Control & Drainage District

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
32	Install and maintain security fencing and signage on levees and dikes in the county.	Flooding	Cascade County, Great Falls, Belt	County Public Works	Moderate	FEMA HMA grants, Levee Districts, Private Owners	Annual Implementation	High	Annual. West GF Flood Control & Drainage District
33	Consider forming a flood control district in Belt to address concerns with the dike.	Flooding	Belt	Town Administration	Moderate	Local budget	Medium Term	Medium	In Progress.
34	Reduce flooding in the Gibson Flats area by installing drainage ditches in the vicinity of Gerber Road.	Flooding	Cascade County	County Floodplain Manager	Moderate	FEMA HMA grants, County	Long Term	Low	In Progress.
35	Resize culverts in various locations throughout the county.	Flooding	Cascade County, Great Falls, Belt, Cascade, Neihart	County and City, Town Floodplain Administrators	High	FEMA HMA grants, County	Medium Term	Medium	Annual.
36	Identify locations in Neihart where culverts are needed.	Flooding	Neihart	Town Floodplain Administrator	Moderate	EPA	Annual Implementation	High	Not Started.
37	Redesign the storm drain system in Belt and Cascade	Flooding	Belt, Cascade	Town Floodplain Administrators	High	CDBG, Town of Belt	Long Term	Low	Not Started.
38	Construct a dike on the west side of the town of Sun River.	Flooding	Cascade County	County Floodplain Manager	High	FEMA HMA grants, County	Long Term	Low	Not Started.
39	Protect riverside berms along the Sun River to prevent erosion.	Flooding	Cascade County	County Floodplain Manager	High	WGFFCDD, County	Medium Term	Medium	In Progress.
40	Evaluate the outlets on West Great Falls levee for improvements in stormwater drainage.	Flooding	Great Falls	City Floodplain Administrator	Moderate	WGFFCDD, City of GF	Medium Term	Low	Annual. West GF Flood Control & Drainage District
42	Explore the possibility of a signed hazardous material route around Great Falls to avoid population center.	Hazmat	Great Falls	County OEM, City and Town Administration, MDT	Moderate	Local budget, MDT	Medium Term	Medium	Not Started.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
43	Ensure local emergency responders have adequate training to respond to hazmat events consistent with local capabilities.	Hazmat	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Great Falls Fire Rescue	Low	Fire Services Training School	Annual Implementation	Medium	Annual. Annual training for Regional Hazmat Team based out of Great Falls Fire Rescue
44	Obtain regional containment equipment trailers and supplies to strategically position for response in the county.	Hazmat	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM	Moderate	County	Medium Term	Low	Annual. Hazmat Trailer, CCHD mobile response trailer for rehab
45	Update resource list of emergency response supplies/vendors.	Hazmat	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City Governments	Low	Local budget	Annual Implementation	High	In Progress. Implemented in 2022 next review scheduled for 06.2023
46	Increase public awareness of common hazardous materials either stored, used, or transported through the area.	Hazmat	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Low	Local budget, MDT	Annual Implementation	High	Annual. LEPC annual Agenda item
47	Educate teachers and school staff in schools near hazardous materials facilities and transportation routes in how to limit exposure to hazardous materials to students during an incident.	Hazmat	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration, Public School District	Low	Local budget	Short Term	High	In Progress. Was monthly meeting with school principals and Calumet Refinery, meetings on hold since COVID
48	Evaluate opportunities to inform private property owners who live along state highways on hazardous-material traffic.	Hazmat	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Low	Local budget, MDT	Short Term	Medium	Annual. CodeRED Public Information Campaigns and LEPC involvement
49	Prioritize active shooter/armed intruder response training for employees of critical facilities.	Human Conflict	Cascade County, Belt, Great Falls	County OEM, City and Town Administration, Public School District, Cascade County Sheriff's Office	Moderate	Local budget, Homeland Security, Cascade County Sheriff's Office	Annual Implementation	Medium	Annual. Annual Training of response agencies at School District buildings

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
50	Consider installing video surveillance or alarms in critical facilities, especially in unattended locations (i.e. – water towers/communication sites/power or water sub-stations).	Human Conflict	Cascade County, Great Falls	County OEM, City and Town Administration, Homeland Security	Moderate	Local budget	Short Term	High	In Progress.
51	Consider physical hardening of critical facilities (i.e. anti-vehicle barricades interior barricades for locking doors [door kicks, door stops] / perimeter fencing / controlled access gates).	Human Conflict	Cascade County, Great Falls	County OEM, City of Great Falls Administration	Moderate	Local budget, Homeland Security	Short Term	Medium	Annual.
52	Conduct comprehensive vulnerability assessment that provides priorities.	Human Conflict	Cascade County, Great Falls	County OEM, City of Great Falls Administration,	Moderate	Local budget, Homeland Security	Short Term	Medium	Annual. West GF Flood Control & Drainage District
53	Continue exercises to prepare for mass casualty incidents	Transp. Accident	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Moderate	Local budget, MHP	Annual Implementation	High	Annual. Biannual exercises at GFFR Training Center, development of City and County MCI Plan
54	Recruit and train EMS volunteers to staff Quick Response Units.	Transp. Accident	Cascade County, Belt, Cascade, Neihart	County OEM, City and Town Administration, MDT, Cascade Rural FD and Cascade FD	Moderate	County	Annual Implementation	High	Annual.
55	Work with railroad to reconstruct Belt underpass to create a wider and straighter alignment.	Transp. Accident	Belt	Town of Belt Administration, MDT	High	Railroads	Long Term	Medium	In Progress.
56	Encourage railroads to enhance safety at crossings.	Transp. Accident	Cascade County, Great Falls, Belt, Cascade	County OEM, City and Town Administration, MDT	Low	Railroads	Long Term	Medium-Low	Not Started.
57	Support awareness of MDT's Transportation Safety Program.	Transp. Accident	Cascade County, Great Falls, Belt, Cascade, Neihart	MDOT, Cascade County	Low	TA Grant-Local	Annual Implementation	Medium	Annual.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
58	Continue grants programs for landowners to create defensible space.	Wildfire	Cascade County	County OEM, DNRC, USFS, BLM	Moderate	FEMA HMA grants, DNRC, USFS, BLM, County	Annual Implementation	High	In Progress.
59	Continue education programs to raise consciousness of landowners on wildfire.	Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Moderate	County, USFS, BLM	Annual Implementation	High	Annual. Social Media and Website educational posts
60	Recruit and train volunteer firefighters	Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	Cascade FD, Cascade Rural FD	Moderate	FEMA HMA grants, County, DNRC, Cascade FD	Annual Implementation	High	Annual. GFFR hosts biannual rural fire academies at Training Center
61	Obtain more 4-WD tenders	Wildfire	Cascade County	County OEM	High	GSA, FEMA HMA grants, DNRC	Annual Implementation	High	In Progress.
62	Install culverts on initial attack roads in Dearborn area.	Wildfire	Cascade County	County OEM	High	FEMA HMA grants, County, USFS, BLM, DNRC	Annual Implementation	High	Not Started.
63	Improve training and qualifications of personnel to more effectively interface with incoming Incident Management Teams deployed in the county.	Wildfire	Cascade FD	Cascade Rural FD, Ulm FD, Gore Hill FD, Great Falls FD	Moderate	DNRC	Medium Term	Medium	In Progress. ICS 300 & 400 classes available in 2022 & 2023
64	Increase availability of water resources for wild land firefighting by strategic placement of water tanks and ponds.	Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Moderate	County, FEMA HMA grants, DNRC	Long Term	Low	In Progress. Map of water tanks created and shared; more data needed on water levels
65	Create a database of water sources for firefighting and make database available to rural fire districts.	Wildfire	Cascade County, Belt, Cascade, Neihart	County OEM, City and Town Administration	Moderate	Local budget	Short Term	Medium	In Progress.



ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
66	Perform fuel treatments along evacuation routes.	Wildfire	Cascade County	County OEM, Fire Department	High	FEMA HMA grants, DNRC, USFS, BLM, County	Annual Implementation	High	Not Started.
67	Study creation of fire breaks in appropriate locations in Conservation Reserve Program lands and areas of future development.	Wildfire	Cascade County	County OEM, Fire Department	Moderate	County, Farm Service Agency	Medium Term	Medium	Not Started.
68	Conduct WUI mapping to support new Community Wildfire Protection Plan.	Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, Fire Department	Moderate	County, Grant	Short Term	High	In Progress.
69	Update Community Wildfire Protection Plan.	Wildfire	Cascade County, Great Falls, Belt, Cascade, Neihart	County OEM, City and Town Administration	Moderate	County, Grant	Medium Term	High	In Progress.
70	Complete a study of impact fees for rural residents to fund more reliable water supplies and fire safety.	Wildfire	Cascade County	County OEM	Moderate	County	Short Term	Medium	Not Started.
71	Stormwater Drainage System Expansion. Increase size of existing storm drains. Add additional storm drains in frequent flood areas/roads. Upgrade storm drain clean outs - improve water flow/maintenance	Multi: Flooding, Summer Weather, Winter Weather	Belt	Town of Belt Administration	High	Local budget, FEMA HMA grants	Medium Term	High	New in 2023
72	Fire Hydrant Expansion. Upgrade all hydrants 25 to 100+ years old and increase number of hydrants in town. Historic Downtown area has only one hydrant currently. Inadequate hydrants for residential and mixed-use areas.	Multi: Wildfire, Earthquake	Belt	Town of Belt Administration	High	FEMA HMA grants	Long Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency & Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
41	Sun River Evaluation. Full evaluation of Sun River to include all tributaries for possible solutions to seasonal and storm driven flooding. Would a full levee be needed? Could river route be adjusted etc.	Flooding	Cascade County	Neighbor counties	Very High	FEMA HMA grants	Long Term	High	New in 2023
73	Town of Belt Levee Resiliency Evaluation and Improvements. Leverage Silver Jackets-Technical Assistance to evaluate benefit of community levee and residual flood risk. Identify levee vulnerabilities and include in PL 84-99 program so levee repairs can be federally funded. Address residual flood risk through potential nonstructural measures.	Flooding	Belt	Town Administration, USACE, Silver Jackets	High	USACE, Silver Jackets, Federal Grants, and in kind	Medium Term	High	New in 2023
74	Hazmat Event Training. Ensure local emergency responders have adequate training to respond to hazmat events consistent with local capabilities.	Hazmat	Cascade	County OEM, Cascade FD, Cascade Rural FD, Ulm FD, Gore Hill FD, Great Falls FD	Low	Fire services training school, local funds	Annual Implementation	Medium	New in 2023
75	Develop a WUI Fire Prevention Program run by career/volunteer Fire Departments that incorporates safety education, mitigation tactics and resources to community members.	Wildfire	Great Falls	City of Great Falls Administration, Fire Departments	Moderate	FEMA HMA grants	Medium Term	Medium	New in 2023
76	Obtain and upgrade 4WD water tenders	Wildfire	Cascade County	Cascade FD, Cascade Rural FD	Moderate	FEMA, DNRC, Cascade County OEM, Cascade Rural FD	Short Term	High	New in 2023
77	Support drought training programs implemented through the Conservation District, FSA, and MSU extension	Drought	Cascade County, Town of Cascade	Conservation District	Low	Cascade County. FEMA, City Budget	Annual Implementation	Medium	New in 2023
78	Perform safety audits on all areas with chemicals	Hazardous Materials Incidents	Cascade, Weds Estate	Department of Labor, MMIA, Cascade Fire Department	Low	Cascade County. FEMA	Medium Term	High	New in 2023

## C.7 Plan Implementation and Maintenance

Moving forward the Cascade 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. County Emergency Management will take the lead on implementation and maintenance in coordination with MT DES.

### C.7.1 Incorporation into Existing Planning Mechanisms

As described in the capability assessment, the County already implements policies and programs to reduce losses to life and property from hazards. This plan builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing actions, where possible, through these other program mechanisms. Where applicable, these existing mechanisms could include:

Cascade County:

- Cascade County Emergency Operations Plan, 2022
- Cascade County Growth Policy, 2014
- Malmstrom AFB Joint Land Use Study, 2012
- Cascade County Community Wildfire Protection Plan, 2008
- Cascade County Flood Insurance Study, 2013
- Cascade County Zoning Regulations, 2021
- Cascade County Subdivision Regulations, 2018
- Dam Emergency Action Plans
- Cascade County Floodplain Regulations, 2013

City of Great Falls:

- Great Falls Area Long Range Transportation Plan, 2018
- Missouri River Urban Corridor Plan, 2004
- City of Great Falls Snow and Ice Control Plan, 2010
- City of Great Falls Zoning Regulations, 2021
- City of Great Falls Amendment to Floodplain Regulations, 2016

Town of Belt:

- Town of Belt Zoning & Subdivision Regulation (draft completed in June of 2022)
- Town of Belt Growth Policy, 2018

Town of Cascade:

- Tree Ordinance, Year
- Town of Cascade Capital Improvement Plan 2021

The process for incorporation of the Regional Hazard Mitigation Plan into other planning mechanisms can be as simple as cross-referencing the Hazard Mitigation Plan where applicable. Integrated planning is a key to building community resiliency.

The CPT noted that Cascade County has used the Montana State Hazard Mitigation Plan as a tool for floodplain management and mitigation. It directly correlates with the Cascade County Growth Policy's Goals and Objectives which are analyzed when doing zoning permitting, and subdivisions. The CPT also reported that the Cascade County Multi Hazard Mitigation Plan 2017 was used to update the Emergency Operations Plan.

The City of Great Falls used the Cascade County Multi Hazard Mitigation Plan 2017 to guide emergency Management and Local Emergency Planning Committee (LEPC) goals, policies & objectives. The plan was also used in the identification for grant opportunities to bring in quality training for EOC/ICS Interface, ICS Section Chief and PIO training.

With each update of the plans listed above, that would be the optimal timeline to integrate or reference the HMP into those existing documents.

### **C.7.2 Monitoring, Evaluation, and Updating the Plan**

Cascade County will follow the procedures to review and update this plan in accordance with Montana Central 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 Cascade County Annex to the Montana Central Region Plan will be evaluated on a regular basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities.

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.