

Annex E Flathead County

E.1 Mitigation Planning and County Planning Team

This County Annex builds on previous versions of the Flathead County Hazard Mitigation Plan completed in 2014. 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 Columbia Falls
- City of Kalispell
- City of Whitefish

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

E.2 Community Profile

E.2.1 Geography and Climate

Flathead County is located in the northwest portion of the State. Flathead is the third largest county in Montana encompassing approximately 5,256 square miles. Figure E-1 displays a map of the County. Flathead is bounded by Glacier, Pondera and Teton Counties on the east, Lincoln County on the west, Sanders, Lake, Missoula and Lewis and Clark Counties on the south, and the Canadian Province of British Columbia to the north. There are three incorporated cities in Flathead County – Columbia Falls, Whitefish, and Kalispell, which is also the county seat, 7th largest city in the state, and one of the fastest growing cities in Montana.

The surrounding mountains are primarily forest lands managed by the federal and state government. Glacier National Park is split between Flathead and Glacier County. About 635,156 acres of the park are located in the County. Other federally managed lands in Flathead County include the Lost Trail National Wildlife Refuge, Swan River National Wildlife Refuge, and the Flathead, Batavia, McGregor Meadows, Smith Lake and Blasdel Waterfowl Production Areas. The Confederated Salish and Kootenai Tribes of the Flathead Nation comprises approximately 28,296 acres of Flathead County. Approximately 24,315 acres of this total are owned by the Confederated Salish and Kootenai Tribes, and over 3,000 acres of the reservation are non-tribal owned private free lands.

There are over 40 lakes and three major rivers – Flathead River, Stillwater River, and Whitefish River. The eastern portion of Flathead County is dominated by mountainous, forest-covered terrain of Glacier National Park and the Bob Marshall Wilderness. These areas are split by narrow river valleys. The Flathead Valley, in the central portion of the county, is a broad flat plain dominated by the Flathead River and by Flathead Lake. The elevation in Flathead County ranges from about 2,900 feet above sea level on the shore of Flathead Lake, to over 10,000 feet in Glacier National Park.

Flathead County hazard mitigation plan characterizes the climate as a west coast marine and continental climate with hot and dry summers and cold winters. Annual precipitation averages 30 inches for the Flathead River basin and increases with altitude. Precipitation ranges between 16 inches a year in valley bottoms to 100 in Glacier National Park. Annual snowfall varies from about 50 inches in the lower valleys to 300 inches or more in the highest mountain areas. Most of the snow falls occurs between November-March and much of the annual runoff occurs in spring with the snowmelt.

E.2.2 Population Trends

According to the 2020 U.S. Census, Flathead County is the fourth most populous county in Montana with a total population of 104,357. The U.S. Census Bureau reported the County experienced a 15.0% increase in population since the 2010 census. Trends show that the population has increased in the County and the incorporated jurisdictions. Specific demographic variables for the County are provided in Table E-1 below.

Table E-1 Population Trends in Flathead County 1980-2020

Incorporated Community	1980	1990	1980-1990 Change	2000	1990-2000 Change	2010	2000-2010 Change	2020	2010-2020 Change
City of Columbia Falls	3,112	2,942	-0.56%	3,645	2.2%	4,688	2.6%	5,362	14.4%
City of Kalispell	10,689	11,917	1.1%	14,223	1.8%	19,927	3.4%	24,602	23.5%
City of Whitefish	3,703	4,368	1.7%	5,032	1.4%	6,357	2.4%	7,848	23.5%
Flathead County	51,966	59,218	14.0%	74,471	26.0%	90,928	22.0%	104,357	15.0%

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

E.2.3 Demographics

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

Table E-2 Demographic Estimates for Flathead County (2016-2020 ACS)

Characteristic	Flathead County	State of Montana
Percentage of persons below 150% poverty estimate	20.3%	24.1%
Unemployment Rate estimate	4%	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	27.1%	21.4%
Percentage of persons with no high school diploma (age 25+) estimate	5.8%	7.5%
Percentage uninsured in the total civilian noninstitutionalized population estimate	9%	9.6%
Percentage of persons aged 65 and older estimate	19.3%	22.1%
Percentage of persons aged 17 and younger estimate	21.8%	21.3%
Percentage of civilian noninstitutionalized population with a disability estimate	12.2%	15.6%
Percentage of single-parent households with children under 18 estimate	3.6%	3.9%

Characteristic	Flathead County	State of Montana
Percentage of persons (age 5+) who speak English "less than well" estimate	0.3%	0.3%
Minority (other than white non-Hispanic) estimate	7.6%	14.6%
Percentage of housing in structures with 10 or more units estimate	5.8%	3.3%
Percentage of mobile homes estimate	10.2%	13.1%
Percentage of occupied housing units with more people than rooms estimate	2.5%	2.1%
Percentage of households with no vehicle available estimate	3.9%	4.9%
Percentage of persons in group quarters estimate	1.2%	2.8%
Percentage Female estimate	50.1%	49.7%
Median Age estimate	42.2	40.1
Median Gross Rent estimate	\$884	\$836
Median House Value estimate	\$294,600	\$244,900
Percent Unoccupied Housing Units estimate	18.8%	15.3%

Source: ACS 2016-2020

E.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 Flathead County as "Relatively Moderate", with a score of 35.7. This is higher than 37.2% of counties within 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 Flathead County (around a fifth) is below the 150% poverty level. Additionally, 27.1% of the population in Flathead County experiences the housing cost-burden, which is in line with the State of Montana average. Nearly a fifth of the population is aged 17 and younger, indicating that many individuals are still dependent on a caretaker, and 3.6% of families are single-parent households with children under 18, which is nearly the same as the Montana percentage. Finally, 5.8% of houses are structures with 10 or more units, which is higher than the State of Montana average.

E.2.5 Development Trends

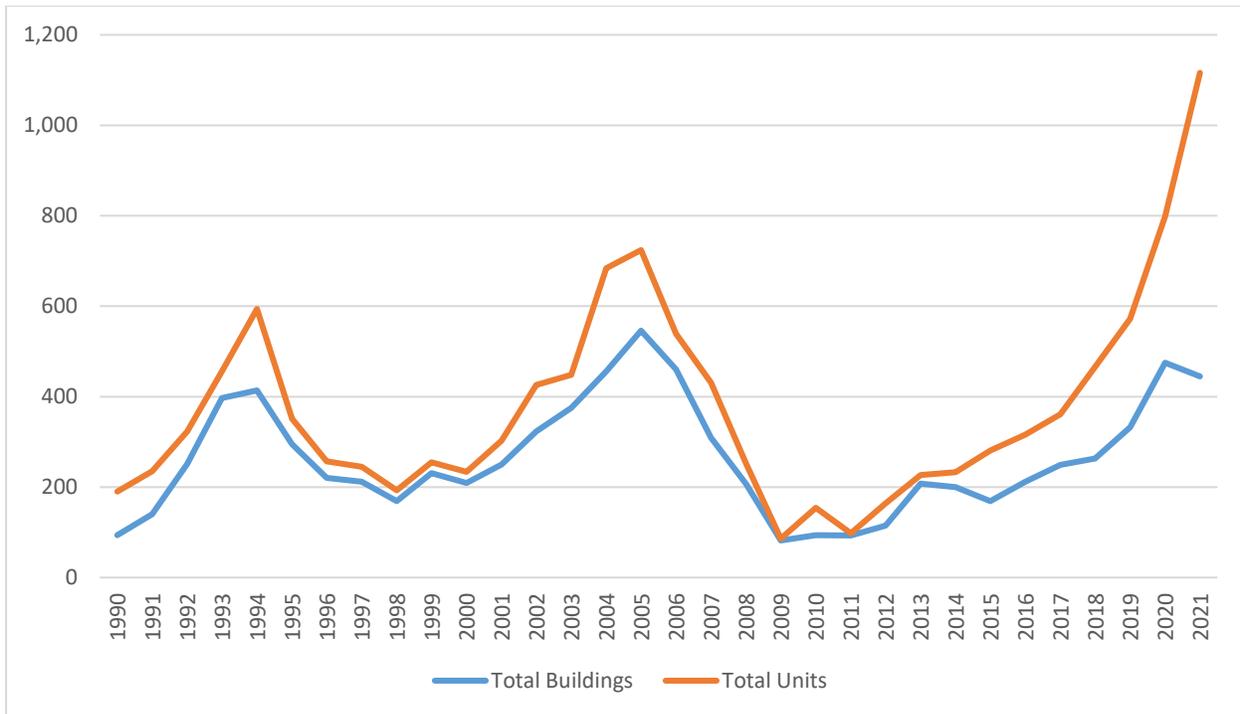
The County is expected to continue to grow in population over the next five years. To accommodate the growth new commercial and industrial development will occur, however, residential lots are the single most rapidly growing land use in Flathead County. Most of the anticipated growth is expected to occur within and near the communities of Bigfork, Evergreen, Lakeside, rural Whitefish and West Valley.

It is estimated that around 59% of the total County acreage is wilderness areas and national forests. The entire rural area of Flathead County is located within the Wildland Urban Interface (WUI). Any development that occurs outside city limits would therefore be within the WUI. In 2020 the Flathead County

Commissioners adopted updates to the Flathead County Growth Policy. The plan includes individual neighborhood growth plans to better reflect the communities' vision for development. Specific growth trends by jurisdictions are listed below:

- **City of Columbia Falls:** Since the recession, particularly in the last five years, residential development has picked up with the construction of single-family residential units in the Cedar Point, Riverbend and River Terrace subdivision. Multi-family development has been added in the South Hilltop, 3rd Avenue East neighborhoods, and downtown. The City has physically grown 38% in the past 25 years. However, with current growth, there is limited vacant developable land within the City. Future growth will occur through annexation and development of vacant lands on the perimeter of the City. However, low density development in outlying areas has increased and caused inefficiencies in providing services. According to the CPT, the city averages 20 new single-family residences per year in the city limits and has seen considerable new commercial development over the last 5 years in the downtown corridor with both new buildings and remodeled buildings. Four new commercial buildings have been completed with retail/office/restaurant space and housing up above, one building is a 3-story all residential condo building. We have not had any significant industrial development.
- **City of Kalispell:** The City has experienced a fluctuation in its population since the 90s. Rapid population growth in the 90s led to the expansion of the City's boundaries due to residential and commercial growth. Development slowed around 2009 with the recession, but since 2012 there has been a consistent increase in population and development. Currently, there is an emphasis on redevelopment of the existing urban core and downtown areas rather than low density development in outlying locations.
- **City of Whitefish:** Population has steadily increased in the City with a larger increase in population over the last decade. The City is currently updating its Growth Policy plan, however, existing plan outlines goals focused on directing commercial and residential development in already urban and commercial areas, particularly in Downtown Whitefish and infill in existing residential neighborhoods.

The U.S. Census Bureau Building Permit Survey provides information and local statistics on new privately-owned residential construction. Figure E-2 below displays the new privately owned housing unit authorizations by year in Flathead County. This data indicates that since 2009 there has been a sharp increase in total units and buildings. 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 E-2 New Privately Owned Housing Unit Authorizations

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

E.2.6 Economy

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

Table E-3 Flathead County Economic Profile

Economic Characteristics	Flathead County
Families Below Poverty Level	6.2%
Individuals Below Poverty Level	10.3%
Median Home Value	\$294,600
Median Household Income	\$57,763
Per Capita Income	\$32,242
Population > 16 Years Old in Labor Force	62.8%
Population Employed	60.3%

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

Table E-4 below shows the breakdown of employment in Flathead 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 of over 20% of the total employment in the County with 10,511 people.

This is followed by “Agriculture, forestry, fishing and hunting, and mining” with 845 people. A close third is the “Retail Trade” Industry with almost 15% of the population in Flathead County employed.

Table E-4 Flathead County Occupation by Industry Profile

Industry	Population Employed	Percent of Labor Force
Agriculture, forestry, fishing and hunting, and mining	2,135	4.3%
Construction	4,374	8.8%
Manufacturing	3,022	6.1%
Wholesale trade	723	1.5%
Retail trade	7,405	14.9%
Transportation and warehousing, and utilities	1,853	3.7%
Information	558	1.1%
Finance and insurance, and real estate and rental and leasing	3,521	7.1%
Professional, scientific, and management, and administrative and waste management services	5,120	10.3%
Educational services, and health care and social assistance	10,511	21.2%
Arts, entertainment, and recreation, and accommodation and food services	6,229	12.6%
Other services, except public administration	2,425	4.9%
Public administration	1,702	3.4%

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

E.3 Hazard Identification and Risk Assessment

E.3.1 Identified Hazards

The CPT reviewed significant hazards for inclusion in the hazard mitigation plan. Some changes were made from the 2014 Flathead County Hazard Mitigation Plan to be consistent with the 2023 Montana Western Region Hazard Mitigation Plan. In this plan update, Cyber-Attack, and Tornado and Windstorms were added.

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

Table E-5 Flathead County Overall Hazard Significance by Hazard and Jurisdiction*

Hazard	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Avalanche	Medium	Low	Low	Low
Communicable Disease	Medium	Medium	Medium	Medium
Cyber-Attack	Medium	Medium	Medium	Medium
Dam Failure	Medium	Medium	Medium	Medium
Drought	High	High	High	High

Hazard	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Earthquake	High	Medium	High	Medium
Flooding	High	High	High	High
Hazardous Materials Incident	Medium	Medium	Medium	Medium
Landslide	Medium	Medium	Medium	Medium
Severe Summer Weather	Medium	Medium	Medium	Medium
Severe Winter Weather	High	High	High	High
Human Conflict	Medium	Medium	Medium	Medium
Tornadoes & Windstorms	Medium	Medium	Medium	Medium
Transportation Accidents	Medium	Medium	Medium	Medium
Volcanic Ash	Low	Low	Low	Low
Wildfire	High	High	High	High

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

<p>Geographic Extent</p> <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>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>Potential Magnitude/Severity</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</p>	<p>Probability of Future 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>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>Overall Significance</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>
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time or result in many permanent disabilities and a few deaths. overwhelmed for an extended period of time or many deaths occur.	High: The criteria consistently fall along the high ranges of the classification and the event exerts significant and frequent impacts on the planning area. This rating is also sometimes utilized for hazards with a high psychological impact or for hazards that the jurisdiction identifies as particularly relevant.
Catastrophic: More than 50 percent of property is severely damaged, facilities and services are unavailable or hindered for more than 2 weeks, the medical response system is overwhelmed for an extended period of time, or many deaths occur.	

E.3.2 Building Inventory and Assets

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

Jurisdiction	Improved Parcels	Improved Value	Content Value	Total Value
Columbia Falls	1,972	\$1,330,850	\$1,330,850	\$2,661,700
Kalispell	9,243	\$2,895,154,403	\$1,662,368,545	\$4,557,522,948
Whitefish	4,816	\$2,025,290,265	\$1,047,996,194	\$3,073,286,459
Flathead Reservation	4	\$862,006	\$504,713	\$1,366,719
Flathead County	30,514	\$9,183,008,363	\$5,062,702,218	\$14,245,710,581
Total	46,549	\$14,589,567,206	\$8,027,566,595	\$22,617,133,801

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

Total building exposure with contents within Flathead County based on an analysis of improved parcels is over \$22.6 billion, with over \$14.5 billion in improved value properties and \$8 billion of contents. Of the more than \$22.6 billion of total building exposure in Flathead County, the City of Kalispell accounts for \$4.5 billion of this total number. Residential properties represent the greatest portion of structures in the County, accounting for over \$8 billion of the nearly \$14.5 billion improved property value. This is shown in Table E-7 below.

Table E-7 Flathead County Total Exposure by Jurisdiction and Property Type

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value
Columbia Falls	Commercial	1	\$1,330,850	\$1,330,850	\$2,661,700
	Exempt	29	\$18,094,970	\$18,094,970	\$36,189,940
	Industrial	3	\$1,602,080	\$2,403,120	\$4,005,200
	Residential	1,937	\$464,116,569	\$232,058,285	\$696,174,854
	Vacant	2	\$107,700	\$107,700	\$215,400
	Total	1,972	\$485,252,169	\$253,994,925	\$739,247,094

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value
Kalispell	Agriculture	1	\$211,940	\$211,940	\$423,880
	Commercial	72	\$100,270,108	\$100,270,108	\$200,540,216
	Exempt	175	\$328,560,468	\$328,560,468	\$657,120,936
	Residential	8,990	\$2,465,571,716	\$1,232,785,858	\$3,698,357,574
	Vacant	5	\$540,171	\$540,171	\$1,080,342
	Total	9,243	\$2,895,154,403	\$1,662,368,545	\$4,557,522,948
Whitefish	Agriculture	5	\$4,180,700	\$4,180,700	\$8,361,400
	Commercial	12	\$14,086,813	\$14,086,813	\$28,173,626
	Exempt	41	\$49,676,738	\$49,676,738	\$99,353,476
	Residential	4,748	\$1,954,588,142	\$977,294,071	\$2,931,882,213
	Vacant	10	\$2,757,872	\$2,757,872	\$5,515,744
	Total	4,816	\$2,025,290,265	\$1,047,996,194	\$3,073,286,459
Flathead Reservation	Agriculture	1	\$147,420	\$147,420	\$294,840
	Residential	3	\$714,586	\$357,293	\$1,071,879
	Total	4	\$862,006	\$504,713	\$1,366,719
Unincorporated Flathead County	Agricultural	1,540	\$630,815,703	\$630,815,703	\$1,261,631,406
	Commercial	387	\$65,815,524	\$65,815,524	\$131,631,048
	Exempt	248	\$109,244,186	\$109,244,186	\$218,488,372
	Industrial	29	\$60,301,750	\$90,452,625	\$150,754,375
	Residential	28,153	\$8,300,914,040	\$4,150,457,020	\$12,451,371,060
	Vacant	157	\$15,917,160	\$15,917,160	\$31,834,320
	Total	30,514	\$9,183,008,363	\$5,062,702,218	\$14,245,710,581
	Grand Total	46,549	\$14,589,567,206	\$8,027,566,595	\$22,617,133,801

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

Critical Facilities, Infrastructure, and Other Important Community Assets

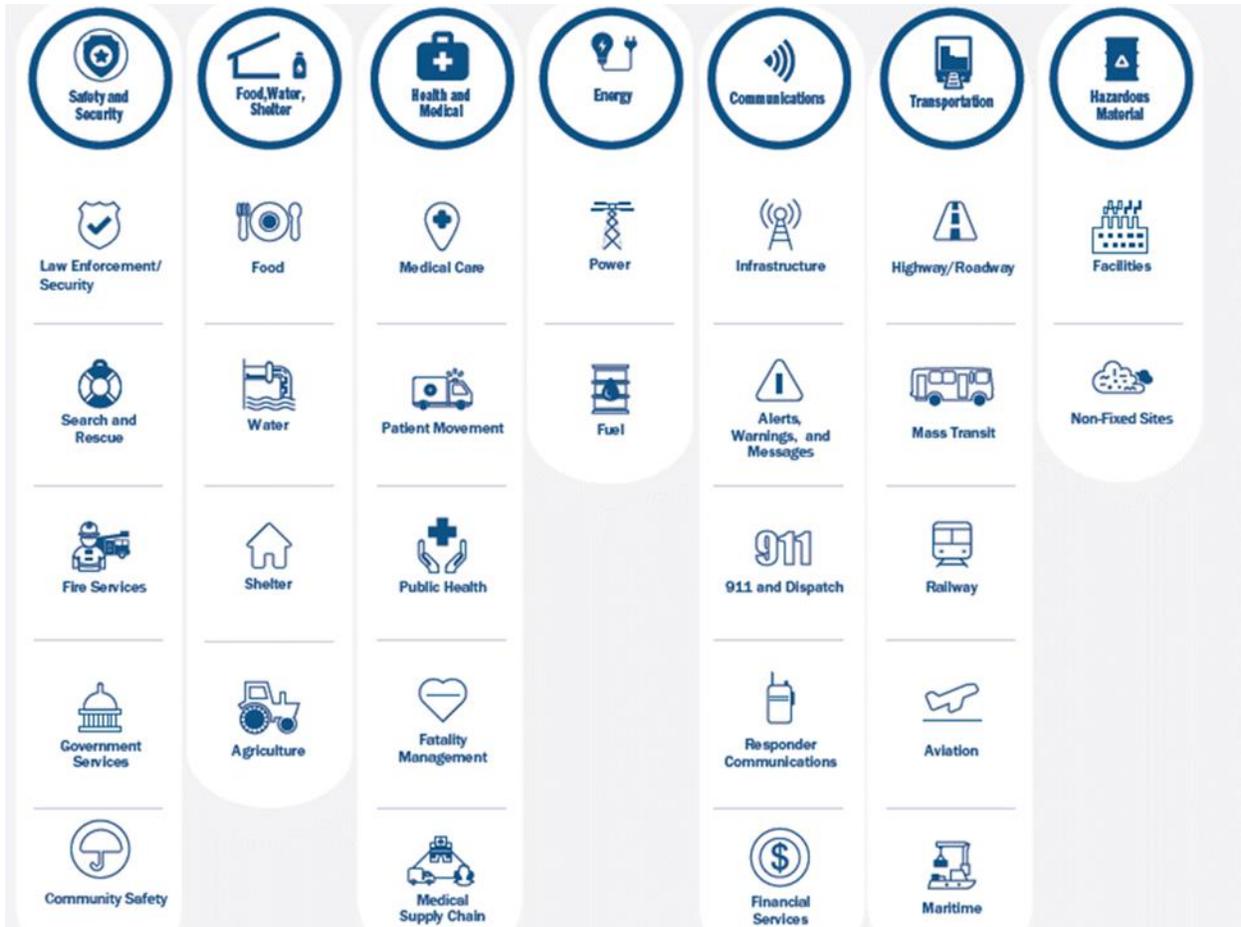
A critical facility is defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. Much of this data is based on GIS databases associated with the 2022 Homeland Infrastructure Foundation-Level Data (HIFLD). Other critical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

FEMA organizes critical facilities into seven lifeline categories as shown in Figure E-3. These lifeline categories standardize the classification of critical facilities and infrastructure that provide indispensable service, operation, or function to a community. A lifeline is defined as providing indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security. These categorizations are particularly useful as they:

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

- Highlight lifeline related priority areas regarding general operations as well as response efforts.

Figure E-3 FEMA Lifeline Categories



Source: FEMA

Table E-8 below summarizes the number of critical facilities by jurisdiction. Figure E-4 through Figure E-7 display the location of critical facilities by FEMA Lifeline in Flathead County, the City of Columbia Falls, City of Kalispell, and the City of Whitefish.

Table E-8 Flathead County Critical Facilities by Jurisdiction

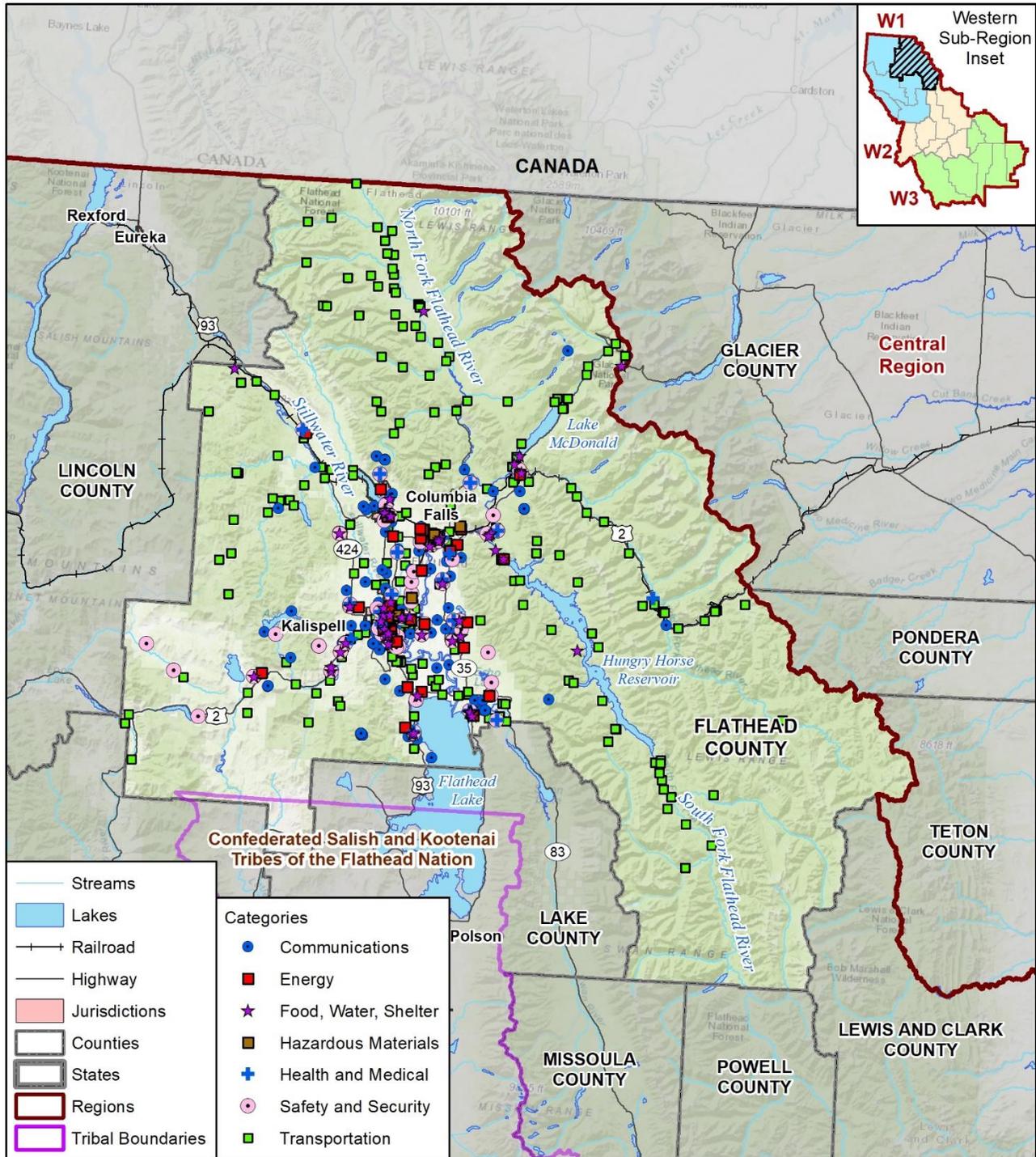
Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Materials	Health and Medical	Safety and Security	Transportation	Total
Columbia Falls	2	2	3	1	1	8	-	17
Kalispell	38	7	13	-	3	38	6	105
Whitefish	3	5	7	-	1	11	4	31

Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Materials	Health and Medical	Safety and Security	Transportation	Total
Flathead County	144	45	42	5	16	76	225	553
Total	187	59	65	6	21	133	235	706

Source: HIFLD 2022, Montana DES, National Bridge Inventory

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Figure E-4 Flathead County Critical Facilities

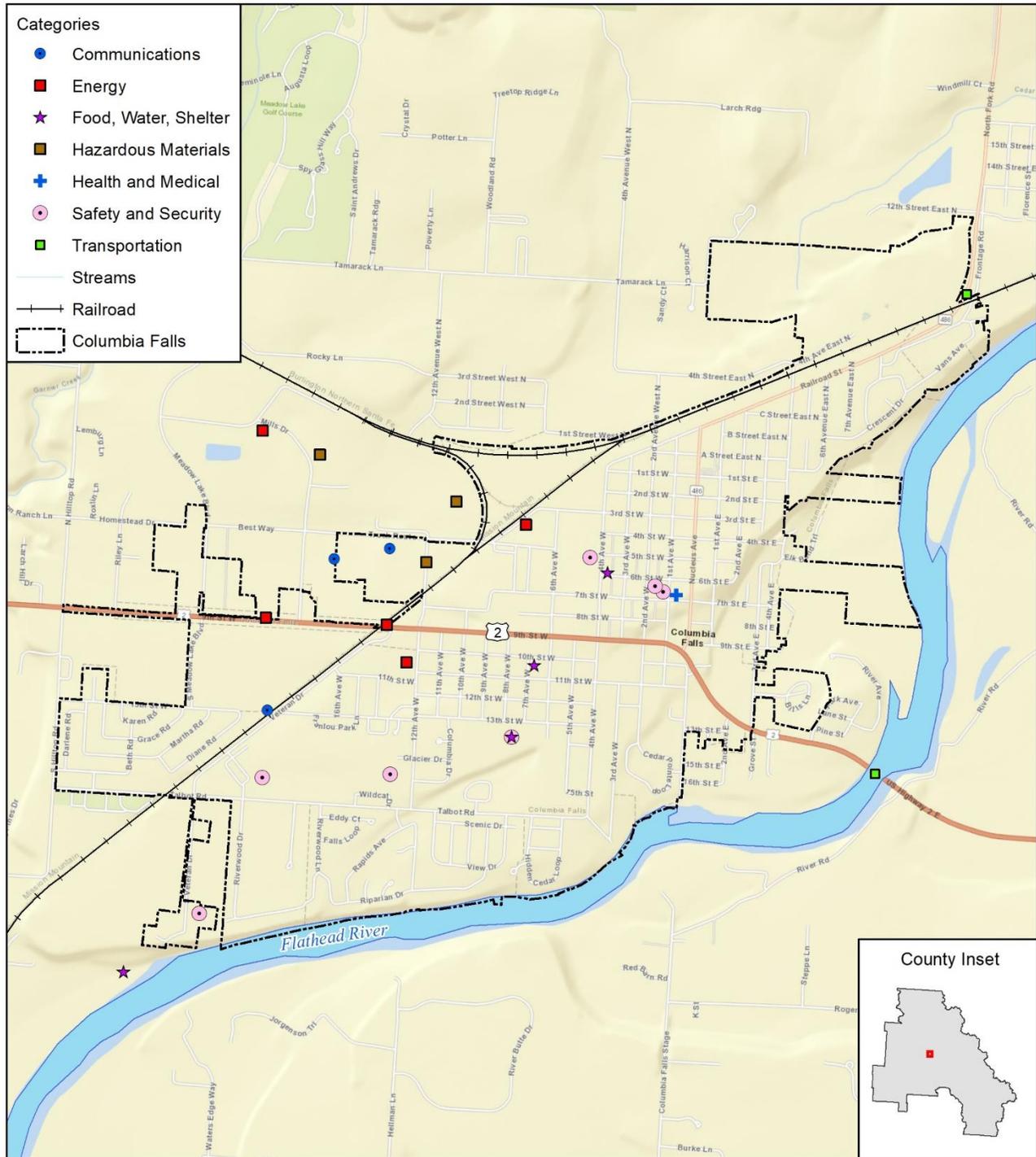


Map compiled 10/2022;
intended for planning purposes only.
Data Source: Montana State Library,
Montana DES, NIB, HIFLD

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Figure E-5 City of Columbia Falls Critical Facilities

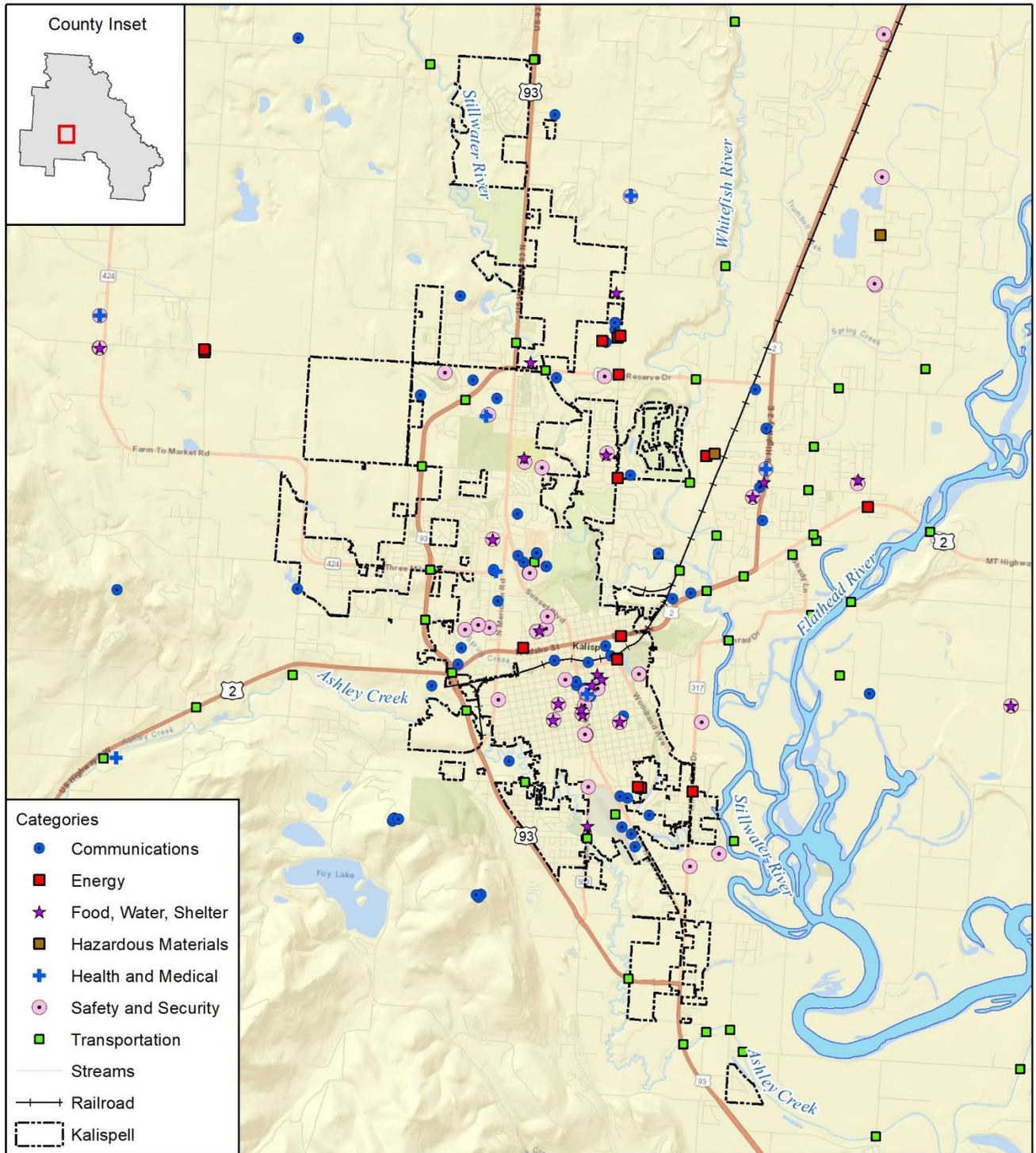


Map compiled 10/2022;
intended for planning purposes only.
Data Source: Montana State Library,
Montana DES, NIB, HIFLD

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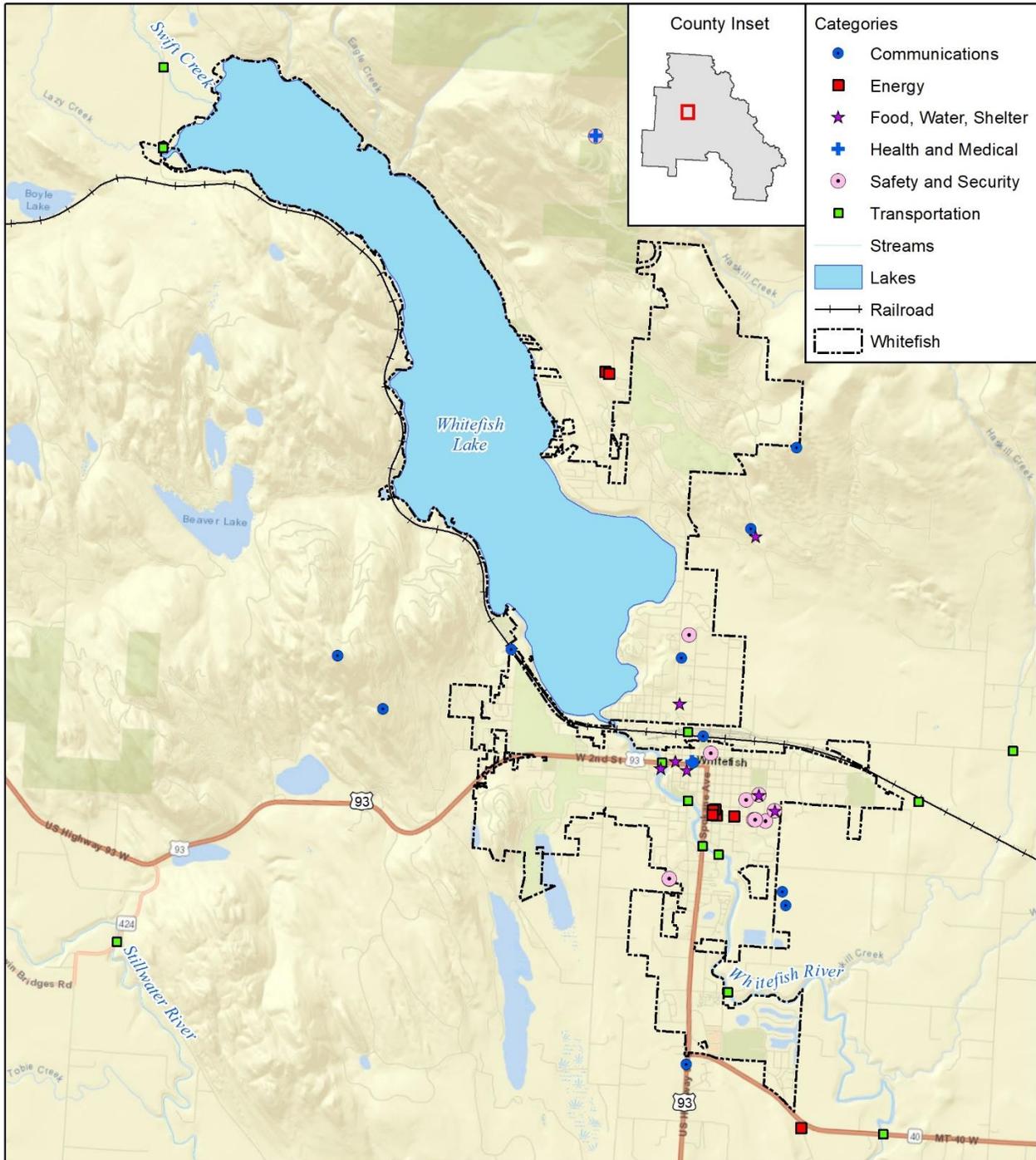


Figure E-6 City of Kalispell Critical Facilities



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

Figure E-7 City of Whitefish Critical Facilities



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

0 1 2 Miles



Natural, Historic, and Cultural Assets

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

Table E-9 Historic Properties and Districts on National Registers

Property Name	City/Town	Location	Date Listed
Bull Head Lodge and Studio	Apgar	Off Going-to-the-Sun-Rd.	2/6/1984
Walsh, Thomas J., Lodge	Apgar	Upper Lake McDonald	11/12/1998
Wheeler Camp (Boundary Increase and Additional Documentation)	Apgar	North end of Lake McDonald, Glacier National Park	10/24/2008
Wheeler, Burton and Lulu, Cabin	Apgar	Lake McDonald	11/27/1998
McCarthy, Margaret, Homestead	Big Prairie	Glacier National Park	7/21/1988
Miller, J. K., Homestead	Big Prairie	Glacier National Park	7/21/1988
Raferly, William, Homestead	Big Prairie	Glacier National Park	7/21/1988
Schoenberger, Anton, Homestead	Big Prairie	Glacier National Park	7/21/1988
Schoenberger, Charlie, Homestead	Big Prairie	Glacier National Park	7/21/1988
Walsh, Johnnie, Homestead	Big Prairie	Glacier National Park	7/21/1988
Walsh's, Johnnie, Guest Lodge	Big Prairie	Glacier National Park	7/21/1988
Kearney Rapids Bridge	Bigfork	Bigfork Canyon Rd.	7/22/1994
Swan River Bridge	Bigfork	Bridge St.	8/3/2015
Flathead River Bridge	Columbia Falls	South end of 4th Ave.	6/17/2010

Property Name	City/Town	Location	Date Listed
Soldiers' Home Historic District	Columbia Falls	Veterans Dr.	4/21/1994
St. Richard's Church	Columbia Falls	505 W. 4th Ave.	3/19/1980
Izaak Walton Inn	Essex	Off US 2 adjacent to RR in Essex	10/18/1985
Hornet Lookout	Flathead National Forest	Hornet Mountain	8/19/1983
Great Northern Railway Buildings	Glacier National Park	Glacier National Park	5/28/1987
Harrison Lake Patrol Cabin	Glacier National Park	US 2	2/16/2001
Lincoln Creek Snowshoe Cabin	Glacier National Park, W. Glacier	US 2	2/2/2001
Flathead National Forest Backcountry Administrative Facilities	Hungry Horse	Flathead Natl. Forest	12/17/2014
Alexander and Busey Houses	Kalispell	106 and 112 Fifth Ave. W.	8/24/1994
Anderson Style Shop	Kalispell	222 Main St.	8/24/1994
Bader-Jaquette and Westwang Houses and Rental Property	Kalispell	46 and 36 5th Ave. W.	8/24/1994
Beaman House	Kalispell	230 Fourth Ave. W.	8/24/1994
Billsborough House	Kalispell	376 6th Ave. E. N.	8/24/1994
Boles, Charles, House	Kalispell	40 Appleway Dr.	2/14/2006
Boyd's Shop	Kalispell	227 First St. W.	8/24/1994
Brice Apartments	Kalispell	228 2nd Ave. E.	8/24/1994
Bruyer Granary	Kalispell	1355 Whitefish Stage Rd.	10/12/2006
City Water Department	Kalispell	336 First Ave. E.	8/24/1994
Conrad, C.E., Memorial Cemetery	Kalispell	641 Conrad Dr.	12/5/2012
Conrad, Charles E., Mansion	Kalispell	313 6th Ave., E.	2/20/1975
Continental Oil Company Filling Station	Kalispell	35 First Ave. N.	8/24/1994
Continental Oil Company Warehouse and Garage	Kalispell	51 First Ave. W. N.	8/24/1994
Cornelius Hedges Elementary School	Kalispell	827 4th Ave. East	6/29/1989
Courthouse Historic District	Kalispell	500--800 blocks of Main St.	8/24/1994
Dean, A. J., House	Kalispell	244 Woodland Ave.	8/11/1980

Property Name	City/Town	Location	Date Listed
East Side Historic District	Kalispell	Roughly bounded by Central St. E., Woodland Park, Woodland Ave., 13th St. E. and 1st Ave. E.	8/24/1994
Equity Supply Company Elevator and Creamery	Kalispell	50 First Ave. W. N.	8/24/1994
Federal Building	Kalispell	247 First Ave. E.	8/24/1994
Ferguson House	Kalispell	320 Fourth Ave. W.	8/24/1994
Fisher House	Kalispell	441 Second St. W.	8/25/1994
Flathead Wholesale Grocery	Kalispell	5 First Ave. E.	8/22/1994
Gay, Edward, House	Kalispell	236 Fifth Ave. W.	8/24/1994
Gibson-Lebert House	Kalispell	461 E. California St.	8/24/1994
Graham House	Kalispell	825 6th Ave. E.	8/24/1994
Great Northern Railway Depot	Kalispell	15 Depot Loop	8/24/1994
Gregg-Moses House	Kalispell	27 8th Ave. W.	8/24/1994
Heller Building	Kalispell	140 Main St.	3/22/1991
Hodgson House	Kalispell	314 9th Ave. W.	8/24/1994
Hotel Norden	Kalispell	24 First Ave. W.	8/24/1994
Houtz House	Kalispell	822 Fifth Ave. W.	8/24/1994
Johnson-Lee House	Kalispell	651 2nd Ave. W. N.	8/24/1994
Kalispell Flour Mill	Kalispell	506 W. Center St.	8/24/1994
Kalispell Main Street Historic District	Kalispell	34--343 Main St. and 116--142 1st Ave. E.	8/24/1994
Kalispell Main Street Historic District Addendum and Boundary Increase	Kalispell	Roughly bounded by Center St to N, 5th St to the S, and the n and s running alleys to the w of Main St	9/3/2010
Kalispell Monumental Company	Kalispell	7 First Ave. E.	8/24/1994
Kalispell-American Laundry	Kalispell	121 First Ave. E.	8/24/1994
Keith, Harry C., House	Kalispell	538 Fifth Ave. E	7/16/1987
Kerr House	Kalispell	136 Fifth Ave. W.	8/24/1994

Property Name	City/Town	Location	Date Listed
Leibig House	Kalispell	396 Fourth Ave. E. N.	8/24/1994
Long House	Kalispell	393 8th Ave. E. N.	8/24/1994
McCarthy-Pederson Farm Historic District	Kalispell	820 Riverside Rd.	12/18/2006
McGee House	Kalispell	454 First Ave. E. N.	8/24/1994
McMannamy House and Rental Properties	Kalispell	1020 5th Ave. W., 1004, 1012 and 1020 1/2 5th Ave. W., and 508 and 516 10th St. W.	8/24/1994
Norwegian Evangelical Lutheran Church and Parsonage	Kalispell	344 and 332 5th Ave. W.	8/17/1994
O'Neil Lumber Company Office	Kalispell	424 Main St.	8/24/1994
Porter Ranch Barn	Kalispell	North Somers Rd.	4/15/1999
Reid-Kent House	Kalispell	246 8th Ave. W.	8/24/1994
Ringleberg, Cornelius, House	Kalispell	1028 Third Ave. W	1/22/1987
Rogers House	Kalispell	380 Fifth Ave. E. N.	8/24/1994
Roose-Eckelberry House	Kalispell	146 Third Ave. W.	8/24/1994
Russell School	Kalispell	227 W. Nevada St.	8/24/1994
Sauser-Mercord Building	Kalispell	223--240 Main St.	8/24/1994
Scandinavian Methodist Church	Kalispell	203 Fifth Ave. W.	8/24/1994
Scott-Forhan House	Kalispell	326 Fourth Ave. W.	8/24/1994
Smith House	Kalispell	476 Fourth Ave. E. N.	8/24/1994
Snyder House	Kalispell	514 8th Ave. W.	8/24/1994
Thibodeau Electric Shop	Kalispell	313 2nd Ave. W.	8/24/1994
Thierwechter House	Kalispell	305 Fourth Ave. W.	8/24/1994
Waggener & Campbell Funeral Home	Kalispell	228 2nd St. W.	8/24/1994
Walker House	Kalispell	1122 First Ave. W.	8/24/1994
West Side Historic District	Kalispell	Roughly bounded by 4th St. W., Main St., 10th St. W. and 4th Ave. W.	8/24/1994

Property Name	City/Town	Location	Date Listed
Woll House	Kalispell	905 Fourth Ave. W.	8/24/1994
Beck, Alice, Cabin	Lake McDonald	S. of Kelly's Camp Rd., E. of McDonald Creek., Glacier National Park	12/26/2008
Greve's Tourist Cabins	Lake McDonald	W. side of Going-to-the-Sun Rd., Glacier National Park	12/26/2008
Kelly's Camp Historic District	Lake McDonald	S. of Kelly's Camp Rd. between Kelly's Creek and by S. of cabins, Glacier National Park	12/23/2009
Lake McDonald Lodge Coffee Shop	Lake McDonald, Glacier National Park	Lake McDonald Lodge Blvd.	10/14/2008
Stillwater Ranger Station Historic District	Olney	U.S. 93	7/8/1981
Adair, W. L., General Mercantile Historic District	Polebridge	On Polebridge Loop Rd. 1/4 mi. E of its intersection with N. Fork Rd.	2/6/1986
Big Creek Ranger Station Historic District	Polebridge	North Fork Rd.	1/7/2015
Ford Schoolhouse	Polebridge	North Fork Flathead Rd. just over nine miles northwest of Polebridge	8/23/2022
Kruse, Billy, Cabin	Polebridge	15920 North Fork Rd.	10/28/2021
Vance Lodge	Polebridge	Polebridge Loop Rd. N side, about 0.5 mi. NW of Polebridge	12/29/1994
Wurtz Homestead	Polebridge	N. Fork Rd., 2 mi. N of Ford, Flathead National Forest	6/19/1996
Swan River Community Hall	Swan River	115 Swan River Rd.	5/30/2002
Apgar Fire Lookout	West Glacier	Near Lake McDonald	12/16/1986
Belly River Ranger Station Historic District	West Glacier	Head of Belly River Valley	2/14/1986
Belton Chalets	West Glacier	U.S. 2	11/15/1978
Bowman Lake Patrol Cabin	West Glacier	Lower end of Bowman Lake 1/2 mi. E of Bowman Lake Ranger Station	2/14/1986
Bowman Lake Road	West Glacier	North Fork drainage, between Polebridge and Bowman ranger stations, Glacier NP	1/19/1996
Camas Creek Cutoff Road	West Glacier	Glacier National Park	7/11/2014
Cattle Queen Snowshoe Cabin	West Glacier	McDonald Subdistrict	7/1/1999

Property Name	City/Town	Location	Date Listed
Coal Creek Patrol Cabin	West Glacier	US 2	7/1/1999
DESMET (boat)	West Glacier	L. McDonald, Glacier NP	12/14/2017
East Glacier Ranger Station Historic District	West Glacier	3/4 mi. N of East Glacier Park on MT 49	12/16/1986
Fielding Snowshoe Patrol Cabin	West Glacier	Off US 2	2/14/1986
Fish Creek Bay Boathouse	West Glacier	Fish Creek Campground, W shore of Lake McDonald, Glacier NP	1/19/1996
Ford Creek Patrol Cabin	West Glacier	Rt. 7	2/14/1986
Going-to-the-Sun Road	West Glacier	Glacier National Park	2/18/1997
Granite Park Chalet	West Glacier	Glacier National Park	6/27/1983
Gunsight Pass Shelter	West Glacier	Jct. of Gunsight Pass Trail and the Continental Divide	2/14/1986
Headquarters Historic District	West Glacier	E of Glacier Rt. 1 at crossing of Middle Fork of the Flathead R., Glacier NP	1/19/1996
Heaven's Peak Fire Lookout	West Glacier	Mount Cannon	12/19/1986
Howes' Lake McDonald Cottage Sites Historic District	West Glacier	N. side of Apgar Loop Rd., Glacier National Park	12/26/2008
Huckleberry Fire Outlook	West Glacier	Summit of Huckleberry Mt.	2/14/1986
Kintla Lake Ranger Station	West Glacier	S shore of Kintla Lake	2/14/1986
Kishenehn Ranger Station Historic District	West Glacier	3 mi. S of Canadian-US border near the intersection of the N fork of the Flathead River and Kishenehn Creek	2/14/1986
Lake McDonald Lodge	West Glacier	Off Going to the Sun Rd.	5/28/1987
Lake McDonald Lodge Historic District	West Glacier	N of West Glacier	5/22/1978
Logan Creek Patrol Cabin	West Glacier	E side of Going-to-the-Sun Hwy. at Logan Creek crossing	2/14/1986
Logging Creek Ranger Station Historic District	West Glacier	Glacier Rt. 7 near Logging Creek	12/16/1986
Loneman Fire Lookout	West Glacier	Access via Loneman Mountain Trail	2/14/1986
Lower Logging Lake Snowshoe Cabin and Boathouse	West Glacier	Near foot of Logging Lake	12/16/1986
Lower Nyack Snowshoe Cabin	West Glacier	W side of Nyack Creek Trail	2/14/1986

Property Name	City/Town	Location	Date Listed
Lower Park Creek Patrol Cabin	West Glacier	E side of Park Creek Trail past crossing of Fielding-Coal Creek Trail	12/16/1986
McCarthy Homestead Cabin	West Glacier	On the N fork of the Flathead River	12/16/1986
Mount Brown Fire Lookout	West Glacier	Off Rt. 1 near Snyder Lake	12/16/1986
North Fork Road	West Glacier	North Fork drainage, Fish Creek to Kintla Lake, Glacier NP	1/19/1996
Numa Ridge Fire Lookout	West Glacier	Near Bowman Lake	2/14/1986
Nyack Ranger Station Historic District	West Glacier	Nyack Ranger Station	2/14/1986
Pass Creek Snowshoe Cabin	West Glacier	Confluence of Waterton River and Pass Creek	12/19/1986
Polebridge Ranger Station Historic District	West Glacier	Near the NE end of Henshaw Bridge on Rte. 7	2/14/1986
Polebridge to Numa Ridge Phonenumber	West Glacier	North Fork drainage, Polebridge to Numa Ridge, Glacier NP	4/4/1996
Ptarmigan Tunnel	West Glacier	N of Ptarmigan Lake	2/14/1986
Quartz Lake Patrol Cabin	West Glacier	Foot of Quartz Lake	2/14/1986
Saint Mary Ranger Station	West Glacier	E end of Upper Saint Mary Lake	2/14/1986
Scalplock Mountain Fire Lookout	West Glacier	Accessible by trail connecting to Boundary Trail near Walton Ranger Station	2/14/1986
Sherburne Ranger Station Historic District	West Glacier	Glacier Rt. 3 near Glacier Entrance	12/16/1986
Sherwood Lodge	West Glacier	Grist Rd., Glacier National Park	12/26/2008
Skyland Camp-Bowman Lake Ranger Station	West Glacier	SW shore of Bowman Lake	2/14/1986
Slide Lake-Otatso Creek Patrol Cabin and Woodshed	West Glacier	N side of Otatso Creek	2/14/1986
Sperry Chalets	West Glacier	E of West Glacier	8/2/1977
Swiftcurrent Fire Lookout	West Glacier	Near the Continental Garden Wall in vicinity of Swiftcurrent Mountain	12/16/1986
Swiftcurrent Ranger Station Historic District	West Glacier	Off Rt. 3 near Swiftcurrent Lake	12/19/1986
Two Medicine General Store	West Glacier	E shore of Two Medicine Lake	2/14/1986
Upper Kintla Lake Patrol Cabin	West Glacier	Head of Kintla Lake	2/14/1986

Property Name	City/Town	Location	Date Listed
Upper Lake McDonald Ranger Station Historic District	West Glacier	N shore Lake McDonald	12/16/1986
Upper Logging Lake Snowshoe Cabin	West Glacier	Near head of Logging Lake	2/14/1986
Upper Nyack Snowshoe Cabin	West Glacier	N side of Nyack Creek	2/14/1986
Upper Park Creek Patrol Cabin	West Glacier	Jct. of Park Creek and Two Medicine Pass Trails	12/16/1986
Walton Ranger Station Historic District	West Glacier	US 2 near Essex	12/16/1986
West Entrance Station	West Glacier	Going-to-the-Sun Rd., near West Glacier, Glacier NP	4/4/1996
First Presbyterian Church of Whitefish	Whitefish	301 Central Ave.	10/1/2004
Great Northern Railway Passenger and Freight Depot and Division Office	Whitefish	500 Depot St.	7/11/2002
Lockridge Medical Clinic	Whitefish	341 Central Ave.	8/14/2012
Taylor, Ray E., House	Whitefish	900 S. Baker Ave.	8/10/1990

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. Flathead County has over 40 lakes and three major rivers. The Flathead Basin watershed is over 8,000 square miles and drains water into Flathead Lake and Flathead River. The Whitefish River and Stillwater River drain the northwest part of the Flathead Basin and join the Upper Flathead River below Kalispell.

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.

E.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.

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

E.4.1 Avalanche

Avalanche is a medium significance hazard for the Flathead County as it has one of the largest populations in Western Montana and is home to multiple popular ski resorts. Due to the remote nature of this hazard, risk is highest in the unincorporated County, and lower in Columbia Falls, Kalispell, and Whitefish.

The FEMA NRI annualized frequency of avalanche events in the County is .05, considered “relatively low,” with three avalanches recorded by the SHELDUS database between January 1960 and December 2019. The Risk Index Rating for avalanches in the County, which accounts for expected annual loss, social vulnerability, and community resilience, is considered “relatively moderate” with a score of 27.3.

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

E.4.2 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 Kalispell, 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 Western Region and there were no noted differences in ranking of communicable disease by jurisdiction in Flathead County.

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

E.4.3 Cyber-Attack

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

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

E.4.4 Dam Failure

Dam failure in Flathead County is ranked as high. There are eight high hazard dams and one significant hazard dam located in Flathead County. Table E-10 below identifies the dams and the nearest downstream cities which could potentially be impacted in a dam failure or incident. Refer to Chapter 4 for a discussion of the dam failure risk relative to Flathead County and the Western Region.

Table E-10 Dams in Flathead County

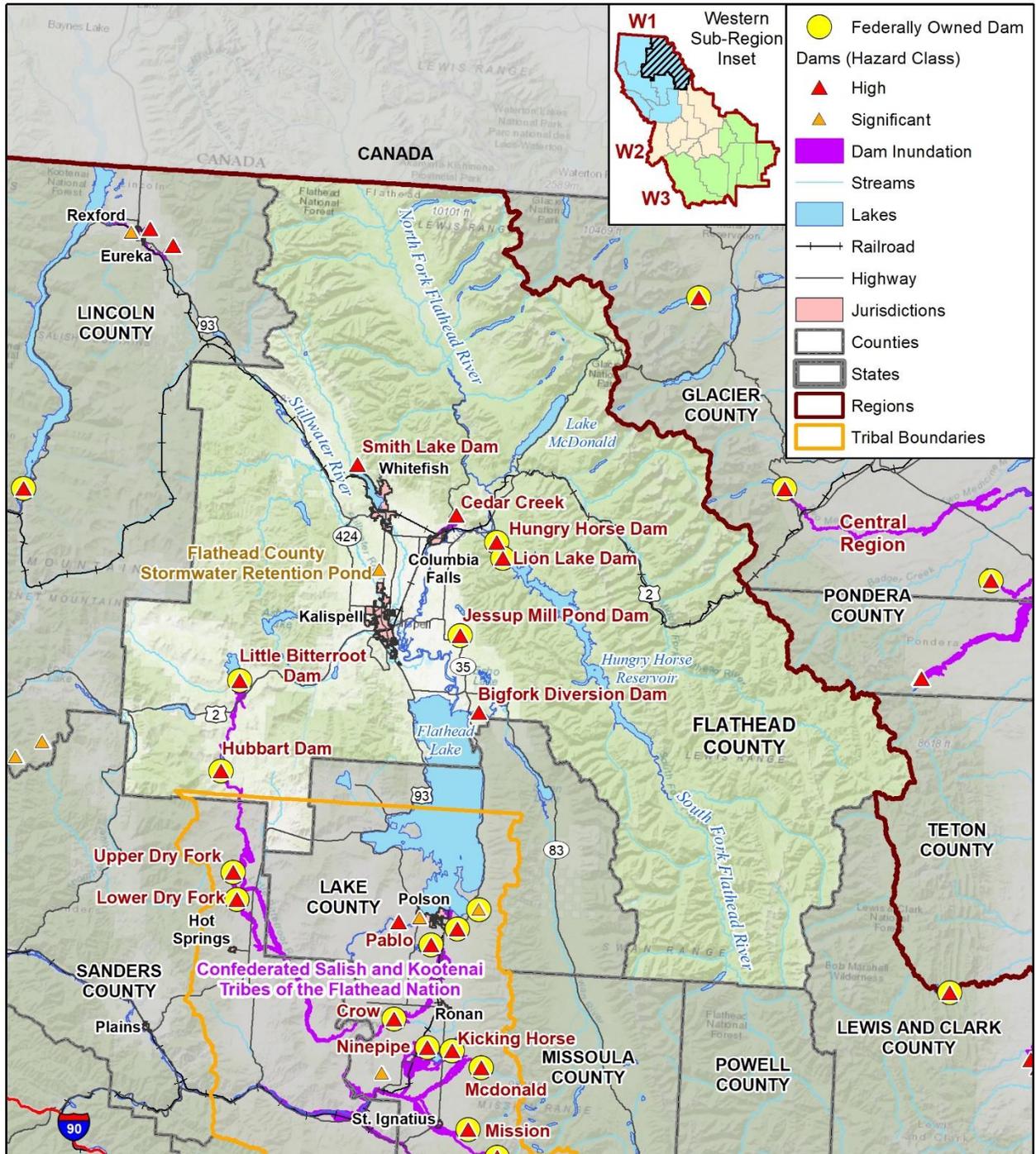
Hazard Class	Dam Name	Owner	River	Nearest Downstream City	Distance to Nearest Downstream City (Miles)	Emergency Action Plans (EAP)
High	Jessup Mill Pond Dam	US Fish and Wildlife Service	Mill Creek	Creston, Mt	2	Yes
High	Lion Lake Dam	Usda Fs	Whelp Creek	Hungry Horse	2	No
High	Smith Lake Dam	State Of Montana, D.N.R.C., T.L.M.D.	Smith Creek		0	Yes
High	Cedar Creek	City Of Columbia Falls	Cedar Creek	Columbia Falls	2	Yes
High	Hubbart	Bia	Little Bitterroot River	None	0	Yes
High	Little Bitterroot	Bia	Little Bitterroot River	None	0	Yes
High	Bigfork Diversion Dam	Pacificorp	Swan River	Big Fork	1	Yes
High	Hungry Horse	Reclamation	South Fork Flathead River	Hungry Horse	4	Yes
Significant	Flathead County Stormwater Retention Pond	Flathead County Solid Waste Dept.	Tr-Stillwater River	Kalispell	0	Not Required

Source: National Inventory of Dams (NID)

Additionally, there are two high hazard dams outside Flathead County, Upper and Lower Dry Fork Dams – whose mapped inundation area extends into the unincorporated areas of Flathead County. The inundation area of this dam is included in the following analysis. There are five federally owned dams within Flathead County. No critical facilities are located in the dam inundation areas in Flathead County.

With eight high and one significant hazard dams in the planning area, dam failure flooding could result in significant property losses and loss to human life. With the concentration of high hazard dams being in proximity to Columbia Falls, dam failure here could cause severe inundation to the surrounding communities. Figure E-8 displays the location of dams in Flathead County. Table E-11 summarizes the estimated number of improved parcels, building values, and people within inundation zones in Flathead County by property type. Flathead County has \$31.6 million total property value located within the inundation zone in the Western Region. Residential property types represent the greatest total number of improved parcels and most property value, with approximately \$28.8 million in total property value at risk.

Figure E-8 Flathead County Dam Inundation



Map compiled 5/2023;
intended for planning purposes only.
Data Source: Montana State Library,
NID, MT DNRC Dam Safety Program

0 25 50 Miles



Table E-11 Flathead County Parcels at Risk to Dam Inundation by Property Type

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value	Population
Flathead County	Agricultural	3	\$499,050	\$499,050	\$998,100	
	Residential	114	\$19,256,355	\$9,628,178	\$28,884,533	287
	Vacant	1	\$904,460	\$904,460	\$1,808,920	
	Total	118	\$20,659,865	\$11,031,688	\$31,691,553	287

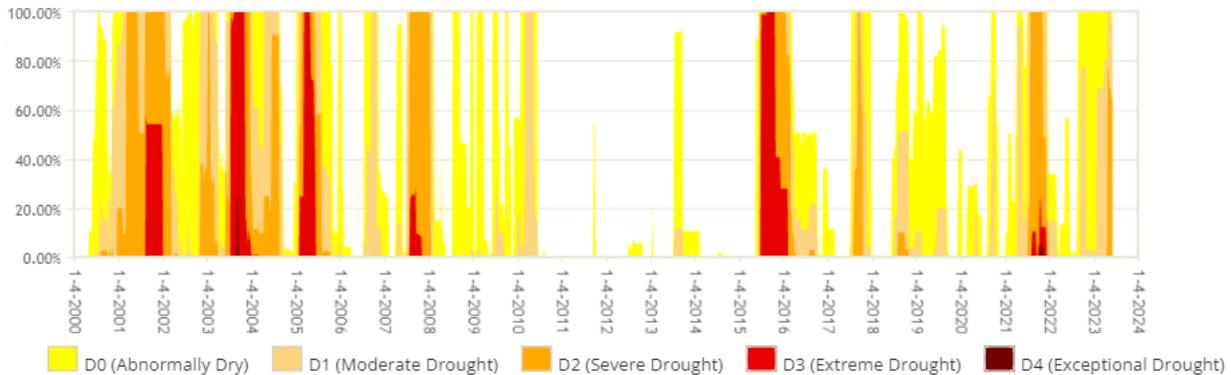
Source: County Assessor data, NID, MT DNRC, WSP GIS Analysis

E.4.5 Drought

Drought was rated as a hazard of high concern in Flathead County. Flathead County experienced 18 USDA drought declarations from 2012-2021, which is higher than the Western Region average. These declarations occurred in 2012, 2015, 2017, 2018, and 2021. The Drought Impact Reporter recorded 18 drought impact reports in Flathead County between 2000-2023. The HMPC didn't note any drought event in the County during the past 5 years.

The U.S. Drought Monitor (USDM) is a national data set released weekly, showing the severity of drought in locations across the nation. Figure E-9 displays a time series showing the severity of drought in Flathead County between 2000 and 2023. The figure indicates that the County experienced extreme drought (D3) in the years 2002, 2004, 2005, 2016, and briefly in 2022.

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

Figure E-9 USDM Drought Timeseries for Flathead County

Source: USDM; www.drought.gov

E.4.6 Earthquake

There are several known fault systems throughout the State of Montana, mostly concentrated in the Western Region. The potential severity of shaking and impacts to casualties and damage is not uniform across the Western Region and is likely to have a greater impact to counties in the northern portion of the region. While most of Flathead County is likely to experience moderate to high losses from an earthquake event, very high losses are likely to occur near the City of Flathead. The earthquake hazard in Flathead County is therefore ranked as high overall significance.

According to a Hazus probabilistic loss analysis conducted for a scenario with 2% in 50 years recurrence, The probabilistic scenario estimated Flathead County will have the greatest losses out of all counties in the Western Region, with \$1,952,212,000 in total economic losses (43.2% of total losses in the region). While all

jurisdictions in the County have adopted building codes, the City of Kalispell is likely to experience greatest losses due to the concentration of population and infrastructure and therefore has a high risk rating. Older and historic buildings will be more vulnerable to earthquake shaking.

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

E.4.7 Flooding

Table E-12 below summarizes the building counts and improved value of parcels in the County, broken out by jurisdiction, that fall within the 1% chance floodplains. Additionally, 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. Flathead County used both NFHL and Hazus flood data to perform this analysis.

Table E-12 indicates the estimated flood losses in each applicable jurisdiction in Flathead County, the unincorporated areas of Flathead County having the greatest numbers of properties at risk and highest estimated losses. The majority of the properties are residential. There is a total value of \$1 billion in improved values and \$252 million in estimated losses to residential properties. This is the largest amount of all property types overall. Whitefish has the 2nd highest amount of properties at risk based on estimated losses. Similar to unincorporated Flathead County the highest property types at risk in Whitefish are residential. Whitefish has nearly \$140 million in total value and over \$34 million in estimated property losses. This is shown in Figure E-10 below.

Table E-12 Flathead County Parcels at Risk to 1% Flood Hazard by Jurisdiction

Jurisdiction	Property Type	Improved Parcels	Improved Value	Content Value	Total Value	Estimated Loss	Population
Columbia Falls	Industrial	1	\$128,240	\$192,360	\$320,600	\$80,150	
	Residential	73	\$38,602,862	\$19,301,431	\$57,904,293	\$14,476,073	184
Flathead Reservation	Residential	1	\$193,900	\$96,950	\$290,850	\$72,713	3
Kalispell	Commercial	1	\$336,480	\$336,480	\$672,960	\$168,240	
	Exempt	8	\$4,162,848	\$4,162,848	\$8,325,696	\$2,081,424	
	Residential	413	\$92,469,561	\$46,234,781	\$138,704,342	\$34,676,085	1,041
Whitefish	Agricultural	1	\$140,760	\$140,760	\$281,520	\$70,380	
	Exempt	4	\$1,290,310	\$1,290,310	\$2,580,620	\$645,155	
	Residential	315	\$93,243,595	\$46,621,798	\$139,865,393	\$34,966,348	794
Flathead County	Agricultural	143	\$49,352,900	\$49,352,900	\$98,705,800	\$24,676,450	
	Commercial	271	\$15,699,850	\$15,699,850	\$31,399,700	\$7,849,925	
	Exempt	40	\$13,003,370	\$13,003,370	\$26,006,740	\$6,501,685	
	Industrial	3	\$5,863,920	\$8,795,880	\$14,659,800	\$3,664,950	
	Residential	2,640	\$674,240,537	\$337,120,269	\$1,011,360,806	\$252,840,201	6,653
	Vacant	17	\$1,242,930	\$1,242,930	\$2,485,860	\$621,465	
	Total	3,931	\$989,972,063	\$543,592,916	\$1,533,564,979	\$383,391,245	8,674

Sources: DNRC, Hazus, FEMA NFHL

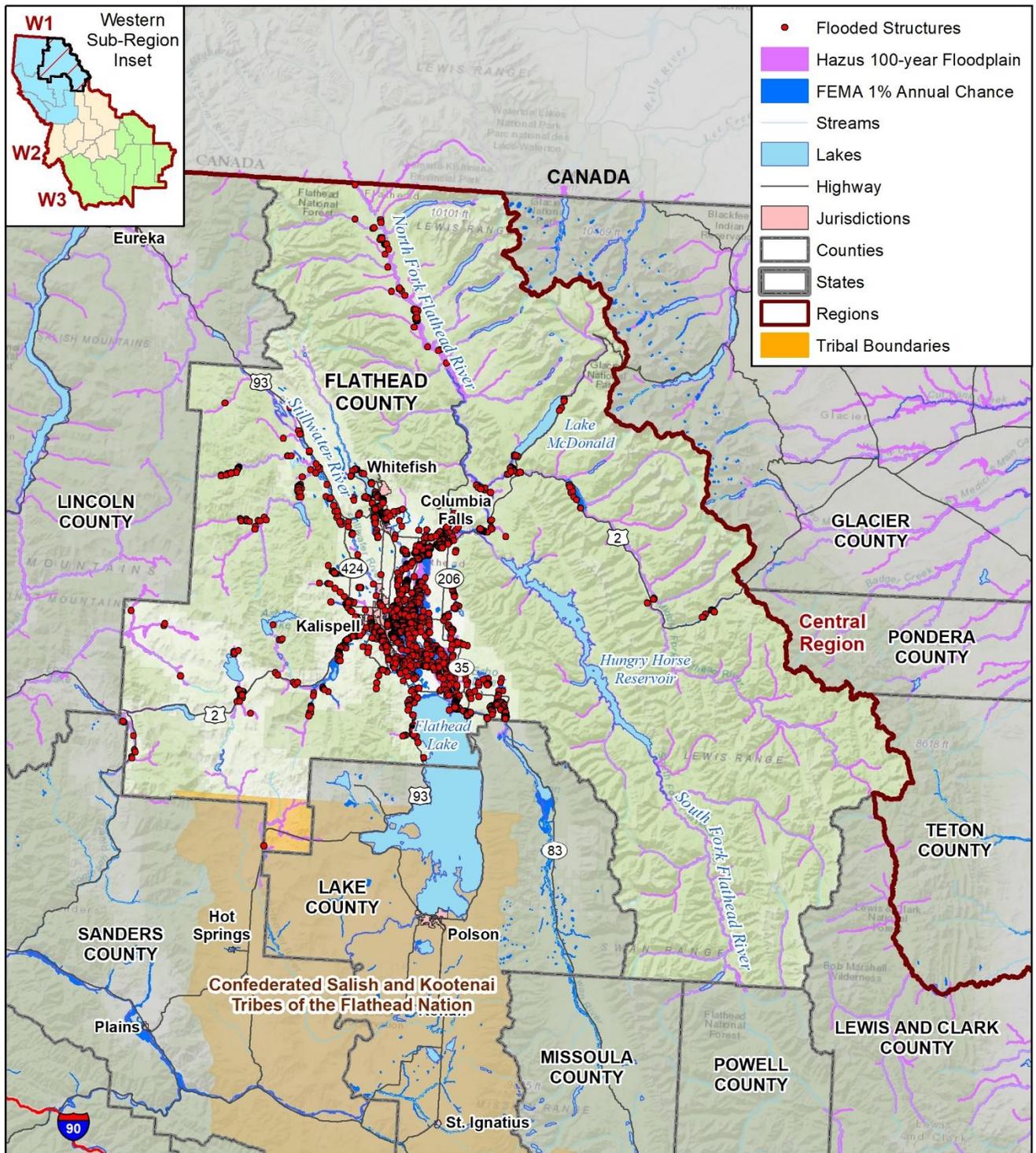
Flathead County has a total of 136 critical facilities located in the 1% annual chance floodplain. 108 are transportation lifelines, 12 are communication facilities, six are energy facilities, five are food, water and shelter and five are Safety and Security facilities. Flathead County has the highest amount of critical facilities located in the SFHA in the Western Region. This is shown in Table F-13 below.

Table F-13 Flathead 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
Columbia Falls	-	1	-	-	-	-	-	1
Kalispell	-	-	-	-	-	1	1	2
Whitefish	-	1	-	-	-	-	4	5
Flathead County	12	4	5	-	-	4	103	128
Total	12	6	5	0	0	5	108	136

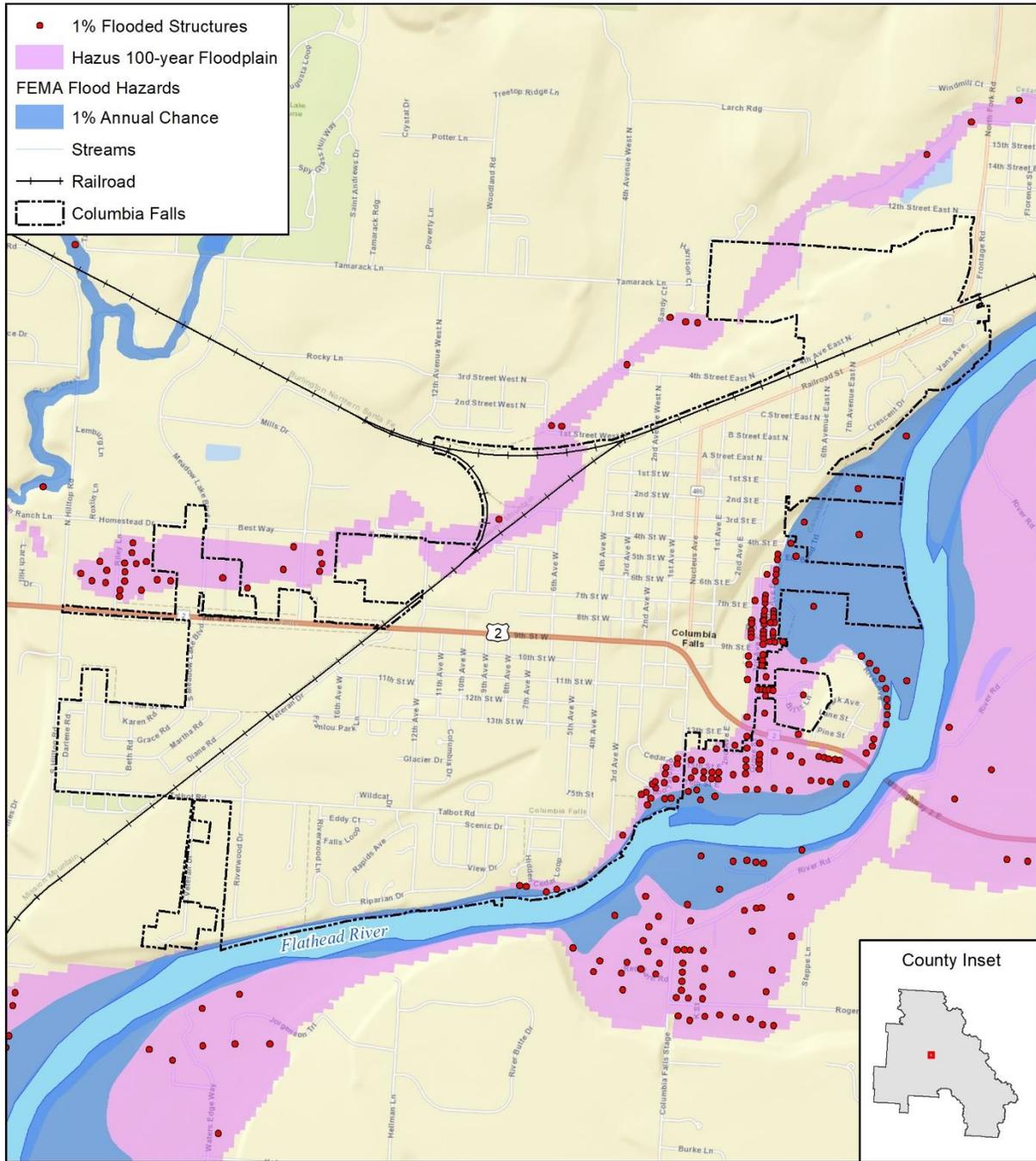
All participating jurisdictions in Flathead County contain structures located in the floodplain, as seen in Figure E-10 through Figure E-13 below.

Figure E-10 Flathead County Flood Hazard and Structures



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

Figure E-11 City of Columbia Falls Flood Hazard and Structures

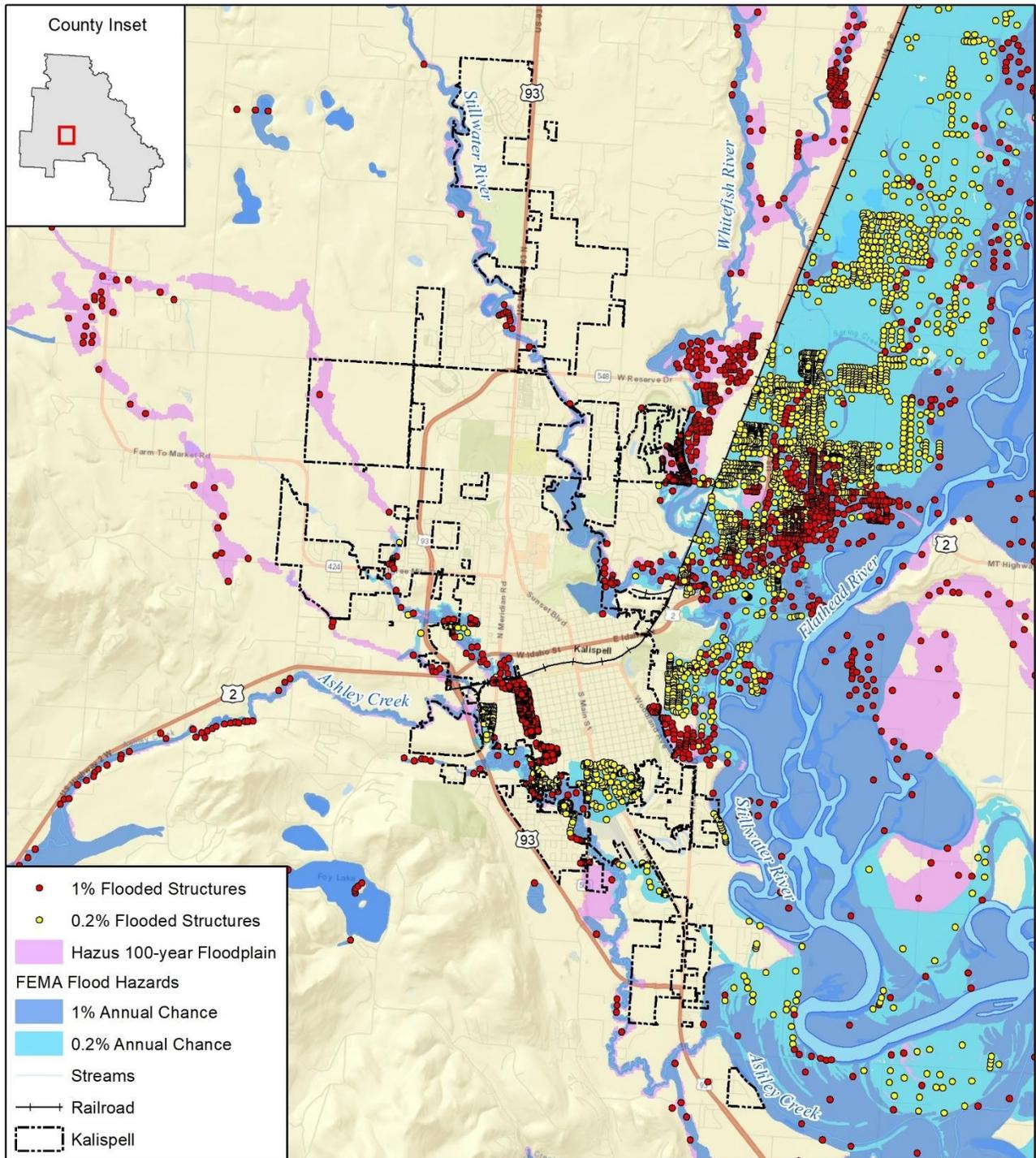


Map compiled 10/2022;
intended for planning purposes only.
Data Source: Montana State Library,
DNRC, FEMA, Hazus

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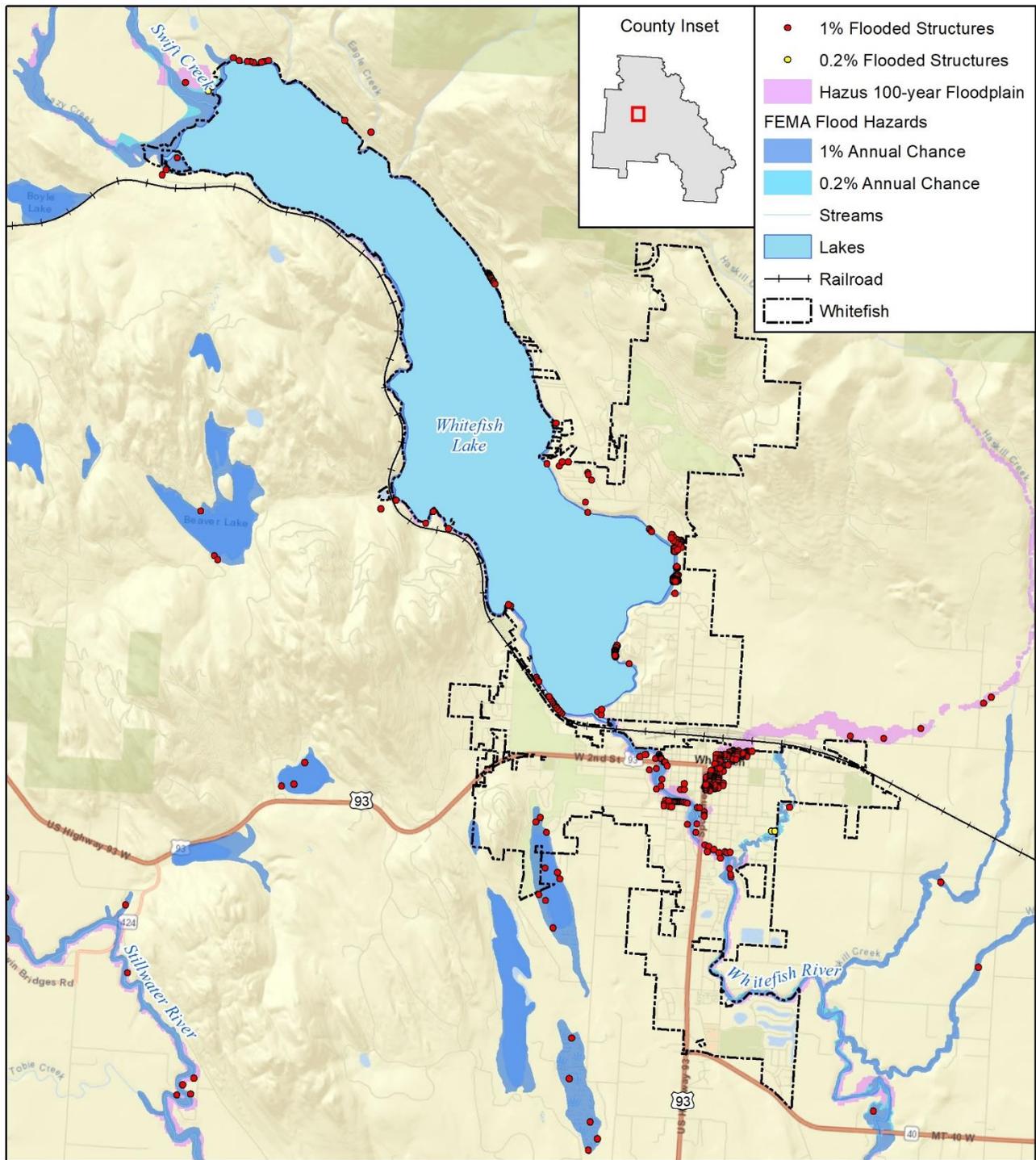


Figure E-12 City of Kalispell Flood Hazard and Structures



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

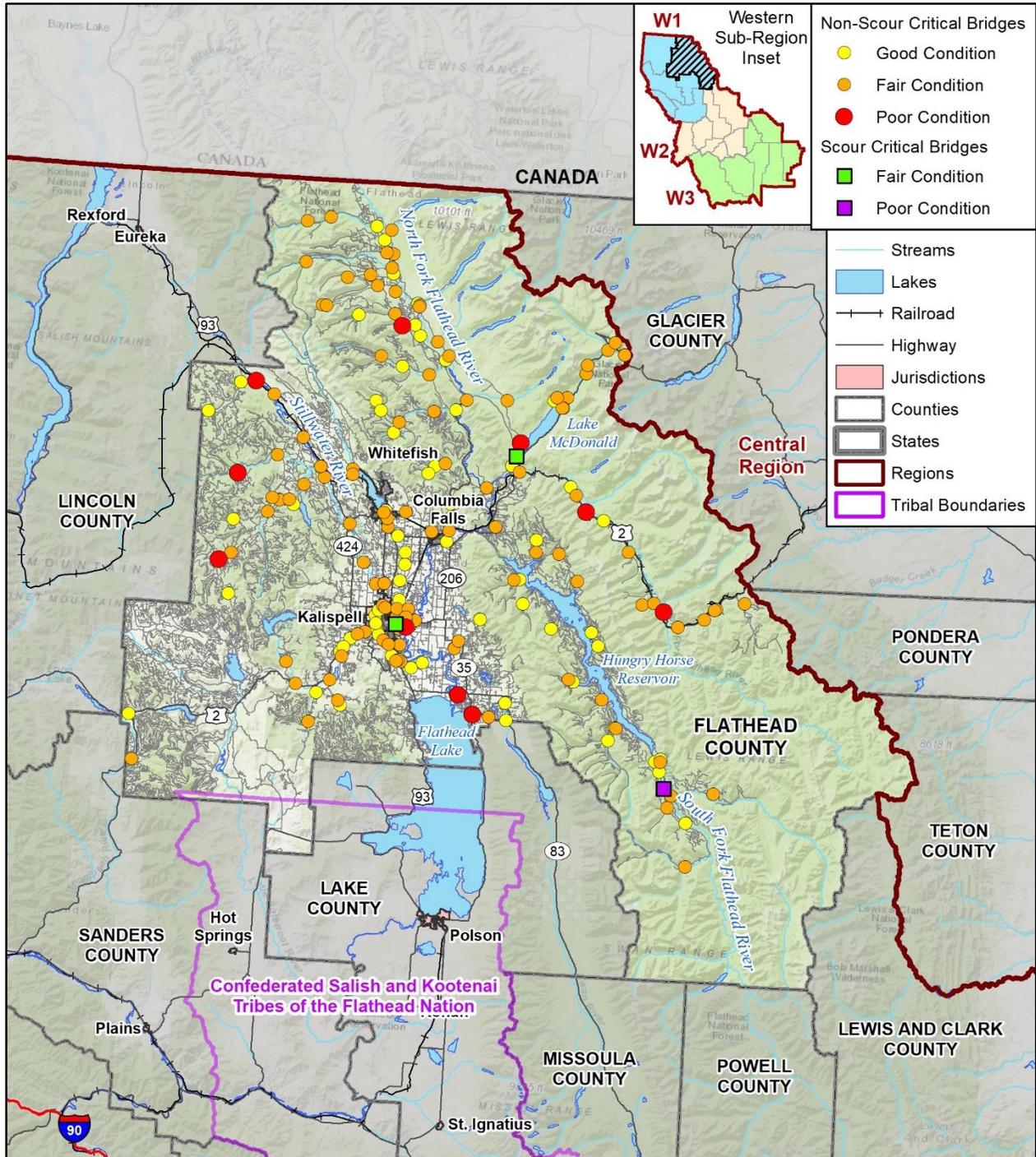
Figure E-13 City of Whitefish Flood Hazard and Structures



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

Figure E-14 below displays the location of bridges in Flathead County and their condition. Refer to Chapter 4 for a discussion of the flood risk relative to Flathead County and the Western Region.

Figure E-14 Flathead County Bridges



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

E.4.8 Hazardous Materials Incident

Hazardous Materials Incidents are ranked as a medium overall significance hazard for Flathead County. Flathead County has two Risk Management Program (RMP) facilities. Additionally, according to the National Response Center (NRC) there were 109 reported hazardous material incidents in Flathead County since 1990, the second greatest number in the Western Region. Flathead County also has gas transmission pipelines present which travel through the communities of Kalispell, Evergreen, Columbia Falls, Hungry Horse, West Glacier, and Whitefish. US Highways 93 and 2 are heavily traveled shipping and transportation routes for the state and country as a whole. Both of these transportation routes are likely locations for future occurrences of hazmat incidents in transit.

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

E.4.9 Landslide

Landslides are ranked as a medium overall significance hazard in Flathead County. Flathead County has a very rugged and mountainous terrain, and geologic data indicates a high confidence in history of past landslides. There have been seven known instances of past landslides in Flathead County, according to the USGS past landslide inventory. Flathead County was also included in a federal disaster declaration involving landslides in the County in 1974. Flathead County also has the highest annualized frequency rating for landslide out of all counties in the Western Region, according to the NRI. Additionally, the NRI ranks Flathead as having a relatively high expected annual loss and a relatively moderate overall risk rating for landslides. While the three incorporated cities of Flathead County are situated in relatively flat areas set back from steep slopes susceptible to movement, there are some unincorporated communities and development throughout the county along Highway 2 and Highway 93 which may be more vulnerable. For more information, refer to Chapter 4 for a discussion of the landslide risk relative to Flathead County and the Western Region.

E.4.10 Severe Summer Weather

Flathead County ranked severe summer weather as a high overall significance hazard. Flathead County experienced the third greatest number of total severe summer weather events in Western Region, including 1 excessive heat event, 97 hail events, 11 heavy rain and 2 lightning events. Property losses from severe summer weather in Flathead County totaled to \$201,600 from 1955 to 2022 (7% of total losses in the Western Region), mainly due to hail events. Flathead County also experienced \$8,600 in total crop losses from severe summer weather (4% of total crop losses in the Western Region). 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 Kalispell, where people and infrastructure are concentrated.

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

E.4.11 Severe Winter Weather

Flathead County ranked severe winter weather as a Medium overall significance hazard. The Flathead/Mission Valleys Zone experienced the sixth greatest number of recorded severe winter weather events in the Western Region and the NRI rated Flathead County as one of the six counties with a “relatively moderate” risk index rating for winter weather. The Flathead/Mission Valleys Zone experienced a total of \$5,431,400 in property losses due to severe winter events from 1955 to 2022 (71% of total losses in the Western Region). All people and property in the county are equally vulnerable to future losses from severe winter weather events. (Source: [NPMS Public Viewer \(dot.gov\)](#))

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

E.4.12 Human Conflict

Human conflict is ranked as an overall medium significance for Flathead County, along with nearly all other counties in the Western Region. In total, three terrorist attacks occurred between 1970-2020, 221 civil unrest/protest events between January 2017 and January 2021, and no active shooter events occurred in the Montana Western Region. One of these terrorist attacks occurred in the City of Kalispell in 1994. Additionally, the City of Kalispell experienced 18 reported protest events from January 2018 to January 2021, therefore, the risk of human conflict in the City of Kalispell is rated as high.

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

E.4.13 Tornadoes & Windstorms

Flathead County ranked tornadoes and windstorms as a Medium overall significance hazard. The Flathead/Mission Valleys Zone experienced the 11th greatest number of high wind and strong wind events in the Western Region, with 56 total events. Additionally, Flathead County experienced the fourth greatest number of thunderstorm wind events and tornado events. Flathead County experienced the greatest losses from thunderstorm wind events in the Western Region, with almost \$2.5 million in recorded property and crop damages. All people and property are vulnerable to tornado and windstorms in Flathead County.

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

E.4.14 Transportation Accidents

Flathead County ranked transportation accidents as an overall medium significance. Flathead County has reported by far the greatest number of roadway crashes in the Western Region, with 11,048 crashes between 2016 and 2020. This is an average of more than 2700 crashes every year. While transportation accidents can occur along any type of transportation route in the county and region, a greater frequency of accidents occur along heavily traveled roadways, such as US Highway 2 and US Highway 93 which run through the county and are the primary road connections for the county to the rest of the state and to Canada. Due to the presence of these roadways in each of the three cities in the county, along with the Kalispell City Airport, the significant tourism volume, and the much higher population and density than much of the region, there is a high likelihood that this hazard will continue to occur at generally higher frequencies than most other counties in the region.

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

E.4.15 Volcanic Ash

All counties in the Western Region and all jurisdictions within Flathead County ranked volcanic ash as an overall low significance hazard. Vulnerability throughout the county is largely uniform and dependent on the scale of volcanic activity impacting the region.

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

E.4.16 Wildfire

Flathead County ranked Wildfire as a high significance hazard. Flathead County has by far the greatest number of individuals in the Western Region in wildfire risk areas, with virtually the entire population living

in fire risk areas. Figure E-15 below displays the wildfire risk in Flathead County. This map shows that nearly all of the Flathead Valley, where the cities of Columbia Falls, Kalispell, and Whitefish are all located, is very high or extreme wildfire risk.

Flathead County has been included in 5 federal disaster declarations for wildfire. The CPT has also noted past wildfires occurring annually throughout the county, ranging in size from smaller than an acre to larger Type I incidents. Together these events have caused numerous impacts and losses in the county annually, including loss of utility poles, timberlands, and crop lands. Property losses have occurred, specifically in the Howe Ridge Fire in Glacier National Park. Road and trail closures due to fire have been common as well, with Highway 2 across John Stevens Canyon closed numerous times due to fire. Multiple closures of the BNSF Rail line in the Hwy 2 Corridor have occurred, which lead to an estimated loss \$1 million an hour. The Northernmost BNSF Rail line is also used by Amtrak for passenger rail service. A major natural gas line also runs through John Stevens Canyon. Flathead County also has key public safety communication sites co-located inside BNSF buildings along the rail line. Fires in Glacier National Park also impact tourist economy.

Table E-14 below summarizes the estimated exposed value of improvements in each wildfire risk category. Based on this analysis, roughly 46,497 improved parcels are exposed to low/medium or higher wildfire risk, totaling about \$22.6 billion in improved building and content value. This represents 99.9% of the total building inventory and building and content value in the county. 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 E-14 Flathead County Parcels at Risk to Wildfire by Jurisdiction and Risk Rating

At Risk Rating	Jurisdiction	Improved Parcels	Improved Value	Content Value	Total Value	Population
At Risk to Extreme Wildfire Hazards	Columbia Falls	754	\$165,820,878	\$84,765,954	\$250,586,832	1,885
	Kalispell	4,654	\$1,072,227,253	\$556,357,109	\$1,628,584,362	11,526
	Whitefish	3,984	\$1,506,921,929	\$769,903,098	\$2,276,825,027	9,911
	Flathead County	10,474	\$2,796,817,486	\$1,440,051,182	\$4,236,868,668	25,704
	Total	19,866	\$5,541,787,546	\$2,851,077,342	\$8,392,864,888	49,027
At Risk to Very High Wildfire Hazards	Columbia Falls	1,193	\$307,563,038	\$163,070,954	\$470,633,992	2,941
	Kalispell	4,071	\$1,220,267,254	\$675,190,176	\$1,895,457,430	9,926
	Whitefish	727	\$458,524,285	\$246,681,743	\$705,206,028	1,799
	Flathead County	17,315	\$5,287,292,078	\$2,920,746,244	\$8,208,038,322	40,048
	Total	23,306	\$7,273,646,655	\$4,005,689,117	\$11,279,335,772	54,714
At Risk to High Wildfire Hazards	Flathead Reservation	1	\$380,540	\$190,270	\$570,810	2
	Columbia Falls	2	\$3,653,366	\$1,826,683	\$5,480,049	5
	Kalispell	32	\$37,351,759	\$26,783,805	\$64,135,564	60
	Whitefish	1	\$1,869,500	\$1,869,500	\$3,739,000	0

At Risk Rating	Jurisdiction	Improved Parcels	Improved Value	Content Value	Total Value	Population
	Flathead County	618	\$283,898,196	\$202,413,368	\$486,311,564	964
	Total	654	\$327,153,361	\$233,083,626	\$560,236,987	1,031

Source: MSDI 2022, MWRA

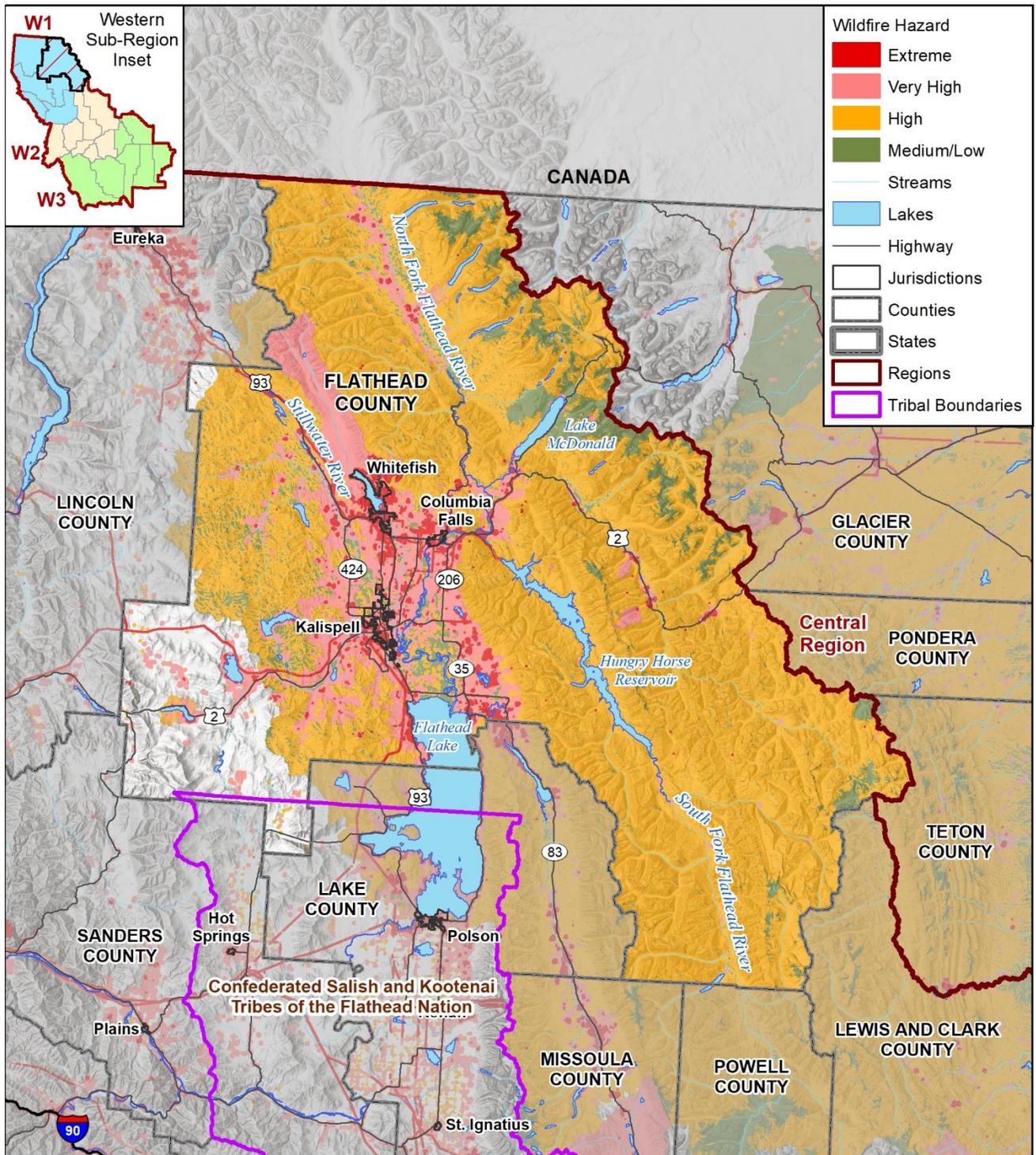
Table E-15 summarizes the potential impact of wildfire on critical facilities and lifelines in Flathead County and its associated jurisdictions. The table highlights the type and number of facilities in each jurisdiction in the County in Wildfire risk areas. See Chapter 4 for the methodology of the critical facilities at risk analysis.

Table E-15 Critical Facilities at Risk to Wildfire Hazards by Jurisdiction, Facility Type, and Risk Rating

At Risk Rating	Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Total
At Risk to Extreme Wildfire Hazards	Columbia Falls	1	1	-	-	-	-	-	2
	Kalispell	10	-	7	-	1	19	2	39
	Whitefish	3	5	5	-	1	8	2	24
	Flathead County	88	35	11	-	12	33	18	197
	Total	102	41	23	0	14	60	22	262
At Risk to Very High Wildfire Hazards	Columbia Falls	1	1	3	1	-	5	-	11
	Kalispell	18	7	5	-	2	17	4	53
	Whitefish	-	-	1	-	-	-	2	3
	Flathead County	38	9	20	3	3	35	94	202
	Total	57	17	29	4	5	57	100	269
At Risk to High Wildfire Hazards	Flathead County	4	-	4	2	-	2	47	59
	Total	4	0	4	2	0	2	47	59
At Risk to Medium/Low Wildfire Hazards	Columbia Falls	-	-	-	-	1	3	-	4
	Kalispell	10	-	1	-	-	2	-	13
	Whitefish	-	-	1	-	-	3	-	4
	Flathead County	14	1	7	-	1	6	64	93
	Total	24	1	9	0	2	14	64	114

Source: HIFLD 2022, Montana DES, NBI, MWRA

Figure E-15 Flathead County Wildfire Hazard



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

0 25 50 Miles

N

E.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.

E.5.1 Regulatory Mitigation Capabilities

Table E-16 lists planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the Western Region and each participating jurisdiction.

Table E-16 Flathead County and Jurisdictions Regulatory Mitigation Capabilities

Plans and Regulations	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Building Codes	Yes	Yes	Yes	Yes
Building Codes Year	2021	--	--	--
BCEGS Rating	--	--	--	--
Capital Improvements Program (CIP) or Plan	Yes	Yes	No	Yes
Community Rating System (CRS)	Yes	No	No	No
Community Wildfire Protection Plan (CWPP)	Yes	No	No	No
Comprehensive, Master, or General Plan	Yes	Yes	Yes	Yes
Economic Development Plan	No	No	Yes	No
Elevation Certificates	Yes	Yes	No	No
Emergency Operations Plan	Yes	No	No	No
Erosion/Sediment Control Program	Yes	Yes	No	No
Floodplain Management Plan	Yes	Yes	Yes	Yes
Flood Insurance Study	Yes	Yes	Yes	Yes
Growth Management Ordinance	Yes	Yes	Yes	Yes
Hazard-Specific Ordinance or Plan (Floodplain, Steep Slope, Wildfire)	Yes	Yes	Yes	Yes

Plans and Regulations	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
National Flood Insurance Program (NFIP)	Yes (12/01/82)	Yes (07/19/82)	Yes (07/19/82)	No - Sanctioned (09/21/93)
Site Plan Review Requirements	Yes	Yes	Yes	Yes
Stormwater Program, Plan, or Ordinance	--	No	Yes	No
Zoning Code or Ordinance	Yes	Yes	Yes	Yes
Other?	Yes	--	--	--

Discussion on Existing Regulatory Mitigation Capabilities

The CPT noted that Flathead County's planning and zoning department handles the existing land use, development ordinances or regulations and hazard specific issues. The Planning and Zoning Department also administer the Floodplain and Floodway Management Regulations and Lake and Lakeshore Protection Regulations. Buildings codes are dictated by the State of Montana, and Flathead has adopted the 2021 code.

The County Subdivision Regulations, updated in 2017 help regulate development in Flathead alongside the County's zoning code. Both tools are used to ensure compliance with regulations meant to uphold safety of the community and development aligned with County goals. Zoning within the city limits of the incorporated jurisdictions is regulated by those communities. Other regulatory documents used to guide development include the County's Growth Policy, a Capital Improvements Program, and the County's Community Wildfire Protection Plan.

Discussion on NFIP Participation and Compliance

Flathead County is a participant of the National Flood Insurance Program. The Flathead County Planning and Zoning Department oversees floodplain activities and where the Floodplain Administrator operates from. Flathead County follows the Floodplain and Floodway Management Regulations most recently updated in 2016. Developments are sternly advised against in the floodplain areas of the County. The CPT noted that most of the new residential, commercial, and industrial development is located outside the floodplain. A few new developments have occurred within the regulated floodplain.

Flathead County also participates in the CRS program and is a Class 9 community. All jurisdictions within Flathead County participate in the NFIP and have effective flood hazard maps (2015).

E.5.2 Administrative and Technical Mitigation Capabilities

Table E-17 identifies the County and participating jurisdictions personnel responsible for activities related to mitigation and loss prevention in Flathead County.

Table E-17 Flathead County Jurisdictions Administrative/Technical Mitigation Capabilities

Administrative and Technical	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Emergency Manager	Yes	No	No	No
Floodplain Administrator/ Position/ Department	Yes	Yes	Yes	Yes
Community Planning:	Yes	Yes	Yes	Yes

Administrative and Technical	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
- Planner/Engineer (Land Development)	Yes	Yes	Yes	No
- Planner/Engineer/ Scientist (Natural Hazards)	Yes	No	No	No
- Engineer/Professional (Construction)	No	No	Yes	Yes
- Resiliency Planner	No	No	No	No
- Transportation Planner	No	No	No	No
Full-Time Building Official	No	Yes	No	Yes
GIS Specialist and Capability	Yes	Yes	Yes	Yes
Grant Manager, Writer, or Specialist	Yes	No	No	No
Housing Authority	No	No	No	No
Warning Systems: (list the hazards each system is used for)	Yes	No	No	No
- Sirens	No	No	No	No
- Reverse 911	Yes	No	No	No
- IPAWS/Wireless Emergency Alerts (WEA)	Yes	No	No	No
- Opt-In Notifications (CodeRed, Everbridge, etc.)	Yes	No	Yes	Yes
- Other system	--	--	Yes	Yes
Other?	--	--	--	--

Flathead County has staff available to carry out and oversee emergency operations and floodplain management regulations. The Planning and Zoning staff help manage land development and other planning activities that support mitigation efforts. The County also has a grant writer on staff that can help the County seek funding for relevant mitigation projects and activities.

E.5.3 Financial Capabilities

Table E-18 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 E-18 Flathead County Jurisdictions Financial Capabilities

Financial Capabilities	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Ability to fund projects through Capital Improvements funding	Yes	--	--	--
Ability to incur debt through general obligation bonds	Yes	--	--	--

Financial Capabilities	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Ability to incur debt through private activities	No	--	--	--
Ability to incur debt through special tax bonds	Yes	--	--	--
Authority to levy taxes for a specific purpose with voter approval	Yes	--	Yes	--
Authority to withhold spending in hazard prone areas	No	--	--	--
Community Development Block Grants	Yes	Yes	Yes	Yes
FEMA Hazard Mitigation Assistance grants	Yes	Yes	Yes	Yes
FEMA Public Assistance funds	Yes	Yes	Yes	Yes
Stormwater Service Fees	Yes	No	Yes	No
System Development Fee	No	No	No	No
Utility fees (water, sewer, gas, electric, etc.)	Yes	No	Yes	Yes
Other?	--	--	--	--

FEMA and Other Grant Funding Leveraged for Hazard Mitigation

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

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

There are many more potential funding opportunities available to the municipalities and county. Funding research will be done during the scoping process for each project. New funding mechanisms may be present that were not before. Flathead County and its jurisdictions have participated in several of these hazard mitigation assistance projects, summarized in the Table E-19 below.

Table E-19 Flathead County Hazard Mitigation Assistance Projects

Program	Date Approved	Project Type	Status	Location
HMGP	1997-06-17	201.1: Relocation of Private Structures - Riverine	Closed	Flathead
HMGP	2018-01-31	106.1: Other Non Construction (Regular Project Only)	Closed	Flathead
HMGP	2013-09-06	401.1: Water and Sanitary Sewer System Protective Measures	Closed	Flathead

Source: FEMA Opendata

E.5.4 Education and Outreach Capabilities

Table E-20 identifies the education and outreach programs in place at the County and participating jurisdictions are or could be used to help promote mitigation activities.

Table E-20 Flathead County Education and Outreach Capabilities

Education & Outreach Programs	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
Ongoing public education programs (fire safety, responsible water use, household preparedness, etc)	Yes	Yes	No	No
Local citizen groups that communicate hazard risks	Yes	No	No	No
Firewise or other fire mitigation program	Yes	No	No	No
National Weather Service StormReady	Yes	Yes	Yes	Yes

Flathead's CPT notes a range of resources used for education and outreach – primarily warning tools used to communicate emergencies to the community.

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

Table E-21 shows the local chapters partnered with the County and participating jurisdictions.

Table E-21 Flathead County Non-Governmental Organizations (NGOs)

Non-Governmental Organizations (NGOs)	Flathead County	City of Columbia Falls	City of Kalispell	City of Whitefish
American Red Cross	Yes	Yes	Yes	Yes
Chamber of Commerce	Yes	Yes	Yes	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes	Yes	Yes	Yes
Environmental Groups	Yes	Yes	Yes	Yes
Homeowner Associations	Yes	Yes	Yes	Yes
Neighborhood Associations	Yes	Yes	Yes	Yes
Salvation Army	Yes	No	Yes	No
Veterans Groups	Yes	Yes	Yes	Yes
Other?	Yes	--	--	--

E.5.6 Opportunities for Enhancement

Flathead County has strong regulatory capability with adequate plans and regulations for implementing mitigation activities. The County also has a wide range of organizational partnerships to support implementation. However, the CPT noted that one of their primary challenges has been engaging County partners in the planning process. The County should consider new ways to engage both community organizations and the public on topics of hazard mitigation and awareness and seek ways to engage these

groups in related planning activities. Establishing an ongoing local mitigation committee could help keep organizations and residents engaged in these issues.

It would also be beneficial for the incorporated jurisdictions to provide more information on their websites about potential hazards, emergency preparedness, and response information. A webpage with consolidated information like evacuation routes, emergency alerts, and links to County, State, and Federal resources would be helpful for residents to learn more and access the information they if an incident occurs.

The CPT explained that lack of adequate staffing and funding has made it difficult to reach vulnerable populations after a hazard event or incident occurs. With support from other County departments like emergency management, the County grant writer should research potential funding new staff positions and opportunities for post-disaster support aimed at reaching vulnerable populations. Improved cross jurisdictional communication can also help identify areas for collaboration and support staffing and other capacity gaps. Other specific opportunities for improvement include:

- Flathead County:
 - Explore opportunities to improve CRS class rating, particularly for public outreach activities
 - Additional partnerships with area agencies to further develop hazard mitigation programs.
- City of Columbia Falls:
 - Consider adopting a system for emergency notification and warnings
 - Consider ways to establish ongoing public outreach on hazard awareness and preparedness
 - Consider joining FEMA Community Rating System (CRS) to lower the cost of flood insurance
- City of Kalispell:
 - Consider joining FEMA Community Rating System (CRS) to lower the cost of flood insurance
 - Consider hiring or establishing a grant writer or specialist
 - Consider ways to establish ongoing public outreach on hazard awareness and preparedness
- City of Whitefish
 - Consider joining FEMA Community Rating System (CRS) to lower the cost of flood insurance
 - Consider ways to establish ongoing public outreach on hazard awareness and preparedness

E.6 Mitigation Strategy

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

E.6.1 Goals

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

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

- Goal 7: Ensure local mitigation programs address underrepresented groups and protect socially vulnerable populations.
- Goal 8: Incorporate the potential impacts of climate change into all mitigation activities.

For reference, the 2014 Flathead County Hazard Mitigation Plan outlined the following goals:

- Goal 1: Minimize Risk of Wildfire at Urban Interface
- Goal 2: Reduce Impacts from Flooding
- Goal 3: Reduce Impacts from Hazardous Material Incidents
- Goal 4: Reduce Impacts from Severe Winter Weather
- Goal 5: Reduce Impacts from Communicable Disease
- Goal 6: Reduce Impacts from Transportation Accidents
- Goal 7: Reduce Losses from Severe Summer Weather
- Goal 8: Reduce Impacts from Earthquakes
- Goal 9: Reduce Impacts from Landslides/Subsidence
- Goal 10: Reduce Impacts from Drought
- Goal 11: Reduce Impacts from Terrorism, Violence, and Civil Unrest
- Goal 12: Reduce Impacts from Dam Failure
- Goal 13: Reduce Impacts from Volcanic Ash
- Goal 14: Reduce Impacts from All Hazards

E.6.2 Progress on Previous Actions

During the 2023 planning process, the Flathead County Planning Team reviewed all the mitigation actions from the 2014 plan. As shown in Table E-22, of 89 actions in the previous plan, two have been completed, and three have been deleted.

Table E-22 Completed and Deleted Actions

ID	Action Name & Description	Hazard(s) Mitigated	Jurisdiction	Status
1.5.1	Subscribe to lightning detection and prediction program through Wildfire Management Information at BLM.	Wildfire	Flathead County	Completed. Currently, there are numerous websites that provide lightning detection and prediction data, that are free, and do not require a subscription. Lightning Detection sites have been implemented and in use since the 2015 Wildland Fire Season. - County
11.1.3	Educate the public and critical infrastructure on "See Something, Say Something" program.	Human Conflict	Flathead County, CFalls, Kalispell, Whitefish	DELETE. This program is no longer used, as it could be construed as biased-based profiling - County, Kalispell, Whitefish, Columbia Falls
13.1.3	Develop/maintain list of house occupants in inundation areas (evacuation list) to include in EAPs.	Dam Failure	Flathead County, CFalls, Kalispell, Whitefish	DELETE. Utilize existing informational brochures for Volcanic Ashfall https://volcanoes.usgs.gov/volcanic_ash/multimedia.ht

ID	Action Name & Description	Hazard(s) Mitigated	Jurisdiction	Status
				ml - County, Kalispell, Whitefish, Columbia Falls
14.3.2	Implement reverse 911 technology that includes cell phones.	Multi: Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire	Flathead County, CFalls, Kalispell, Whitefish	Completed. CodeRed Emergency Notification Software IPAWS Wireless alerts 2016, reverse 911 to landlines 2022. Will be soliciting proposals from vendors in 2023 for a new five year contract.
12.1.4	Develop/maintain list of house occupants in inundation areas (evacuation list) to include in EAPs.	Dam Failure	Flathead County, CFalls, Kalispell, Whitefish	DELETE. The ability to maintain an accurate list of house occupants in inundation areas is not realistic with the growth Flathead County is experiencing.

E.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.

E.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 Flathead County and its jurisdictions. The process used to identify, develop, and prioritize these actions is described in Chapter 5 of the base plan. Flathead County has 84 continuing or in progress mitigation actions carried over from the previous plan and has added an additional 69 new actions.

Table E-23 lists the 2023 Mitigation Action Plan for Flathead County and its participating jurisdictions. The CPT identified and prioritized the following mitigation actions based on the risk assessment and goals, and objectives. It is grouped by hazard(s) mitigated). Background information as well as information on how the action will be implemented and administered, such as ideas for implementation, responsible office, partners, potential funding, estimated cost, and timeline also are described. Per the DMA requirement, actions have been identified that address reducing losses to existing development as well as future development.

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

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

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

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

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

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

Table E-23 below lists the mitigation actions for each participating jurisdiction in Flathead County. All jurisdictions have developed mitigation actions for each identified hazard in the HMP.

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Table E-23 Mitigation Actions by Hazard and Jurisdiction Summary

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
1	Provide landowner, farmer, rancher and homeowner education on wildfire and fuel reduction of the WUI and adjoining lands.	Wildfire	Flathead County	Fire Depts., Fire Service Area/OES, DNRC, USFS, NRCS;	Low	RC&D Grants	Ongoing	High	In Progress. Firesafe Flathead, Fire Districts, Flathead Fire Service Area, DNRC, USFS, And Homeowners Associations All Participate In Providing Information Regarding Fuel Reduction And Other Measures To Protect Homes From Wildfire - County
2	Support controlled burns to mitigate wildfire risk.	Wildfire	Flathead County	Fire Depts., Fire Service Area/OES, DNRC, USFS, NRCS;	Moderate	Internal	Ongoing	High	In Progress. Controlled Burns Are Used In Flathead County To Help Mitigate Wildfire Risks - County
3	Encourage ingress and egress fuel reduction.	Wildfire	Flathead County	Fire Depts., Fire Service Area/OES, DNRC, USFS, NRCS;	Moderate	Internal	Ongoing	High	In Progress. Addressed through Subdivision Regulations - County
4	Encourage fuel reduction in utility right-of-ways and around critical infrastructure.	Wildfire	Flathead County	Fire Depts., Fire Service Area/OES, DNRC, USFS, NRCS; Flathead Electric, Lincoln Electric, Glacier Electric, Bonneville Power Administration	Moderate	Internal	Ongoing	High	In Progress. Flathead Electric continues to be proactive in removing trees within their right of way that may threaten power lines. - County Ongoing pruning schedule by Forestry Department. - Kalispell
5	Perform weed control or mowing along county roads and encourage weed control or mowing along railroads and USFS roads.	Wildfire	Flathead County	Railroads, USFS, County Weed Depts.;	Low	County, USFS, Railroads	Ongoing	Medium	In Progress. Mowing and weed control are done along roads annually - County
6	Support alternative methods to burning when reducing fuel hazards, such as chipping and harvest.	Wildfire	Flathead County	Fire Dept., Fire Service Area/OES; USFS, DNRC	Low	Internal Grants	Ongoing	Low	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
7	Annex subdivisions outside of existing rural fire districts into nearest district, if possible.	Wildfire	Flathead County	County Planning Dept., Fire Service Area/OES;	Low	Internal	Ongoing	Medium	<p>In Progress. Ongoing during zone changes, subdivision reviews - County</p> <p>Design standards and site review occurs with each proposed development. - Kalispell</p>
8	Ensure convenient access to and within all subdivisions for the largest emergency service vehicles.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, Fire Districts, City Fire Depts., Fire Service Area;	High	Internal	Ongoing	Medium /High	<p>In Progress. Addressed through subdivision regulations and road design standards - County</p> <p>Design standards and site review occurs with each proposed development. - Kalispell</p> <p>Addressed through zoning and subdivision standards, adoption of WUI Standards - Whitefish</p> <p>Addressed through Planning Regulations - Columbia Falls</p>

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
9	Encourage two or more subdivision access points in areas of high and extreme fire hazard.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, Fire Districts, City Fire Depts., Fire Service Area;	Low	Internal	Ongoing	Medium /High	<p>In Progress. Reviewed as part of each new Subdivision Application, with recommendations based on the number of lots - County</p> <p>Design standards and site review occurs with each proposed development. - Kalispell</p> <p>Addressed through zoning and subdivision standards, adoption of WUI Standards - Whitefish</p> <p>Addressed through Subdivision Regulations - Columbia Falls</p>
10	Encourage defensible space and fuel treatments on new subdivisions.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, Fire Districts, City Fire Depts., Fire Service Area;	Little to no cost	Internal	Ongoing	Medium /High	<p>In Progress. Subdivision Regulations - County</p> <p>Subdivision reviews occur through the approval process. Vegetation height ordinance covers community. - Kalispell</p> <p>This is done through public education - Whitefish</p> <p>Subdivision Regulations, DNRC defensible space recommendations - City of Columbia Falls</p>

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
11	Implement Community Wildfire Protection Plan.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	Fire Dept., Fire Service Area/OES; USFS, DNRC	Moderate	Internal	Ongoing	Medium /High	In Progress. CWPP was updated in 2011, and another revision with plan adoption in 2021. This plan is scheduled to be reviewed every five years, or as needed if earlier. - County Review adopted CWPP on an annual basis - Whitefish Review adopted CWPP - Columbia Falls
12	Encourage water supply systems in new and existing subdivisions.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, Fire Districts, City Fire Depts., Fire Service Area;	Low	Internal	Ongoing	Medium /High	In Progress. Currently under a Fire Committee Review, to be updated in County Subdivision Regulations. - County Implemented through the annexation process. Subdivision regulations, utility growth policy- Kalispell Addressed through zoning and subdivision regulations, and building codes - Whitefish Addressed through Subdivision Regulations -Columbia Falls
13	Encourage a structure sprinkler systems program.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, Fire Districts, City Fire Depts., Fire Service Area;	High	Internal	Ongoing	Medium /High	In Progress. Building and Fire Code policies and regulations - Kalispell IPC code for Commercial - Whitefish Where required, but based on State Building Codes - Columbia Falls

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
14	Support homeowner fuel reduction programs to get landowners to do fuel reduction on private properties.	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	FEPC, Fire Depts., Fire Service Area/OES, DNRC, USFS, NRCS, Homeowners;	Low	RC&D Grants	Ongoing	High	In Progress. Firesafe Flathead, Firewise, Fire Districts, Flathead Fire Service Area, DNRC, USFS, And Homeowners Associations All Participate In Providing Information Regarding Fuel Reduction And Other Measures To Protect Homes From Wildfire - County Participate in Firewise - Whitefish
15	Improve fire agency infrastructure (training facility, additional fire equipment storage, enhanced communications systems).	Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	Fire Dept., Fire Service Area/OES;	High	Internal, AFG Grants, Safer Grants, VFA Grants	Ongoing	MEDIUM	In Progress. Added staffing and equipment enhancements. - Kalispell Built a new fire training facility at the Rural Fire Station utilizing internal funding. Training facility completed 2020/2021 - Columbia Falls
16	Identify areas with high number of fire starts and inadequate suppression equipment.	Wildfire	Flathead County	Fire Depts., GIS, Fire Service Area/OES, DNRC, USFS;	Low	Internal	Short Term	Medium	In Progress. Fire evaluates, and identifies projects as needed - Kalispell
17	Install more year-round water draft sites (dry hydrants) in the rural fire districts.	Wildfire	Flathead County	Fire Dept., Fire Service Area/OES;	Moderate	Internal	Short Term		In Progress. Addressed through subdivision regulations and application review - Whitefish Currently reviewing subdivision regulations - County, Columbia Falls
18	Evaluate bridges and culverts at risk from flooding and develop schedule and funding to replace or upgrade as necessary.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	County Public Works, MDT, City Public Works;	Moderate	Internal	Ongoing	Medium	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
19	Implement stream bank restoration projects to improve floodplain.	Flooding	Flathead County, Columbia Falls	County Planning; Private Landowners	High	Grants	Long Term	Low/High	In Progress. Continue to monitor and evaluate areas of concern, and apply for grant funding as needed. - County Currently working on obtaining funding for bank restoration, bank stabilization along River's Edge Park - Columbia Falls
20	Encourage installation of backflow valves.	Flooding	Flathead County, Columbia Falls, Kalispell	County and City Planning, MT Dept. Labor, Public Works;	Low	Individual Building Owners	Medium Term	High/Medium	In Progress. Backflow valves are required in the Floodplain - County Required as part of meter pit installation. - Kalispell Required - Columbia Falls
21	Install storm drains in municipalities, as needed.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	County Public Works, City Public Works; DEQ	High	Grants	Medium Term	Medium	In Progress. Addressed in Subdivision Review process with includes comments from DEQ- County Required as part development. - Kalispell
22	Elevate roadways, as needed to reduce flood damage.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	County Public Works, City Public Works;	Very High	Grants	Long Term	Low/Medium	In Progress. Roads are constantly being assessed and areas identified to be elevated as funding allows - County Evaluate on an ongoing process for maintenance of the system - Kalispell
23	Install water retention basins to improve safety from flooding.	Flooding	Flathead County, Columbia Falls, Kalispell	County Public Works, City Public Works, County Planning;	High	Grants	Long Term	Medium	In Progress. Being addressed through Subdivision Regulations and permit process - County Evaluate on an ongoing process for maintenance of the system - Kalispell

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
24	Identify areas that could be turned into parks to mitigate reoccurring flood damage.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	Planning Depts, Public Works;	Low	Internal	Medium Term	Low/Medium	In Progress. Evaluate, and make recommendations based on observations during high water events - County Inclusion as part of upcoming Parks Master Plan. - Kalispell
25	Obtain real time automated river gauges.	Flooding	Flathead County, Columbia Falls, Kalispell	USGS, Landowners;	Moderate	USGS, HMGP	Medium Term	High/Medium	In Progress.
26	Promote flood insurance education, especially insurance agents and home \ business owners living in floodplain.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	County & City Planning, OES, DNRC;	Low	Internal	Ongoing	High	In Progress. Social Media Education, Flood Insurance Flyers and Information - County Through floodplain administrator - Kalispell Currently working on obtaining a new Community Rating System Certificate - Whitefish
27	Adopt new FEMA maps and updates of existing flood plain studies as they become available.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, OES, City Planning;	Low	Internal	Ongoing	Medium/High	In Progress. Adoption of new FEMA maps and updates November 2015 - County Updated maps and regulations. Will continue as information emerges. - Kalispell Updated Maps adopted - Whitefish Adopted latest released FEMA maps - Columbia Falls

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
28	Review and revise flood plain regulations as changes occur in the NFIP, Montana law, and/or local policy.	Flooding	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning;	Little to no cost	Internal	Ongoing	Medium /High	In Progress. Review/Revision October 2016 - County Updated maps and regulations. Will continue as information emerges. - Kalispell Updated based on latest information from the State. - Whitefish
29	Ensure emergency service personnel have current training and equipment for response.	Hazmat	Flathead County, Columbia Falls, Kalispell, Whitefish	Fire Service Area/OES; Individual Fire Districts, City Fire Departments, MSU Fire Training School	Low	Internal, AFG Grants, Safer Grants, VFA Grants	Ongoing	Medium /High	In Progress. Coordination of Hazmat Awareness Courses - County City of Kalispell Fire hosts the Regional Hazmat Team Firefighters are certified at the Hazmat Operations Level - Whitefish Firefighters are certified at the Hazmat Operations Level - Columbia Falls
30	Educate emergency service personnel on capabilities of privately owned response equipment and local government resources.	Hazmat	Flathead County, Columbia Falls, Kalispell, Whitefish	., Fire Service Area/OES; Kalispell Fire, Civil Support Team, BNSF	Low	Internal	Ongoing	High	In Progress. Partner with BNSF to conduct hazardous materials spill training, and what resources they have available for response, also work with Civil Support Team to incorporate first responders into their training exercises, and coordinate with the Regional Hazmat Team (Kalispell FD) to provide training to local departments - County, Whitefish
31	Work with vulnerable populations along hazardous material routes to ensure they have a response plan.	Hazmat	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Low	Internal	Ongoing	Medium	In Progress. Areas of concern have been identified, and staff are currently developing response plans - Whitefish

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
32	Create a brochure targeting people along hazmat routes on commodities transported and response.	Hazmat	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, LEPC;	Low	Internal	Short Term	Medium /High	REVISE Action/Project. Work in coordination with BNSF, and local fire districts to develop a presentation, and informational materials for public presentations, and preparedness events. -County, Cfalls, Kalispell, Whitefish
33	Promote businesses doing their Tier II reporting.	Hazmat	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, LEPC, ; Fire Districts	Low	Internal	Ongoing	Medium /High	In Progress. Campaign in process of being developed. - Kalispell
34	Continue to support the Highway 93 Alternate.	Hazmat	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, LEPC;	High	Internal	Ongoing	High	In Progress. Continue to support the completion of overpasses on the south end of US 93 Alternate. The US 93 Alternate was completed for through traffic from US 93 South of Kalispell to US 93 North and was opened to the public in October 2016. Since then the Foy's Lake roundabout has been replaced with an overpass, and there are plans to replace the Airport Road, and Basecamp roundabouts with overpasses also. - County Ongoing phased segments. - Kalispell
35	Encourage public to report trees at risk of impacting power lines.	Multi: Dam Failure, Drought, Flooding, Summer Weather, Winter Weather, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	Flathead Electric, County & City Public Works;	Low	Internal	Ongoing	High	In Progress. Flathead Electric continues to be proactive in removing trees within their right of way that may threaten power lines. - County Ongoing pruning schedule by Forestry Department. - Kalispell

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
36	Provide outreach on recognizing when danger zone has approached; i.e. snow load on roofs, etc.	Multi: Avalanche, Dam Failure, Drought, Flooding, Summer Weather, Winter Weather, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES/NWS;	Low	Internal	Medium Term	High	In Progress. OES does public outreach via social media for all dangerous weather events. - County
37	Develop a response plan on how to handle individuals determined to be diagnosed with a communicable disease while on-route through air travel.	Communicable Disease	Flathead County	City-County Health, Airport Authority, Sheriff;	Low	Internal	Short Term	Medium /High	In Progress.
38	Continue to provide public health surveillance, disease investigations, and mitigation strategies.	Communicable Disease	Flathead County, Columbia Falls, Kalispell, Whitefish	Healthcare Providers, City-County Health, Hospitals;	Low	Internal	Ongoing	Medium /High	In Progress.
39	Continue Public Health education on sanitation and prevention.	Communicable Disease	Flathead County, Columbia Falls, Kalispell, Whitefish	City-County Health, DEQ;	Low	Internal	Ongoing	Medium /High	In Progress.
40	Educate on the importance of employee cross training, record keeping and COOP plans to minimize the impact of epidemics.	Communicable Disease	Flathead County, Columbia Falls, Kalispell, Whitefish	City-County Health;	Low	Internal	Ongoing	Medium /High	In Progress.
41	Continue Education and increase awareness with schools and daycares regarding the importance of and need for vaccination.	Communicable Disease	Flathead County, Columbia Falls, Kalispell, Whitefish	City-County Health;	Low	Internal	Ongoing	Medium /High	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
42	Continue collaboration with community partners in regards to mass casualty planning.	Communicable Disease	Flathead County, Columbia Falls, Kalispell, Whitefish	City-County Health, Hospitals, Sheriff;	Low	Internal	Ongoing	Medium /High	In Progress.
43	Identify problem intersections and recommend traffic control methods.	Transportation Accidents	Flathead County, Columbia Falls, Kalispell, Whitefish	MDT, County & City Public Works;	Moderate	Internal	Ongoing	Medium /High	In Progress. Problem Intersections are constantly being evaluated and data collected. Additional stoplights, reduced speeds, and installing roundabouts have been implemented - County Ongoing with review of safer streets and transportation planning. - Kalispell Addressed in the transportation plan - Columbia Falls
44	Examine unprotected railroad crossings and recommend if gates / signage are needed.	Transportation Accidents	Flathead County, Columbia Falls, Kalispell, Whitefish	Railroad, OES County Road, and City Streets/Public Works, MDT; Federal Rail Administration, BNSF	Moderate	Internal	Ongoing	Medium /High	In Progress. Working with BNSF, and MDT on a solution for Birch Point Crossing. Identified Birch Point, and Lumpfer Crossings as locations of concern. - Whitefish Currently in discussions with BNSF regarding crossings of concern - Columbia Falls
45	Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during wind events. Encourage private land owners to remove hazardous trees	Multi: Dam Failure, Drought, Flooding, Summer Weather, Winter Weather, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	County & City Public Works, Flathead Electric, Fire Departments;	Moderate	Internal	Ongoing	High	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
46	Promote NWS Severe Weather Awareness Week.	Multi: Dam Failure, Drought, Flooding, Summer Weather, Winter Weather, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES / NWS;	Little to no cost	Internal	Ongoing	Medium	In Progress.
47	Provide outreach on the risks of lightning and other severe summer weather hazards.	Multi: Dam Failure, Drought, Flooding, Summer Weather, Winter Weather, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES / NWS;	Low	Internal	Ongoing	Medium /High	In Progress. Suggest Severe Weather planning safety considerations for pre-planned special events, use social media to provide education regarding different severe weather hazards, and how to prepare, and protect during the hazard. As events occur through social media - Kalispell Provide severe weather educational materials in the applications for special events - Whitefish
48	Conduct site evaluations of critical facilities.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, OES, City Building, City Public Works, ; Private Industry, School Districts	Low	Grants	Medium Term	Medium /High	In Progress. Part of Building Code review - Kalispell

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
49	Install window film for shatter prevention in schools.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	School Districts;	Moderate	Grants, Internal	Medium Term	Medium	In Progress. School Districts are notified regarding grant funding availability, and are directed to contact Montana DES Mitigation. Identified the need to do more educational outreach to the school districts regarding earthquake mitigation actions that can be implemented - County, Whitefish
50	Implement non-structural mitigation program for public schools, i.e., equipment/furniture straps.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	School Districts;	Moderate	Grants, Internal	Medium Term	Medium	In Progress. School Districts are notified regarding grant funding availability, and are directed to contact Montana DES Mitigation. Identified the need to do more educational outreach to the school districts regarding earthquake mitigation actions that can be implemented - County, Whitefish
51	Encourage , and implement non-structural and structural retro fits of government buildings, particularly critical infrastructure.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	County Planning, OES, City Building Departments;	Moderate	Grants, Internal	Medium Term	High/Medium-High	In Progress. As funding allows, if gov't building is located within city limits and is being remodeled, it must be brought up to date with the latest building codes, which could address the structural retrofits. - County Occurs as improvements are made through building code - Kalispell

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
52	Encourage residential and business retrofit programs.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, City Building Depts;	Low	Grants, Internal	Medium Term	Medium /Medium-High	In Progress. Information is provided to anyone who expresses interest - County Based on current Building Codes - Columbia Falls
53	Encourage enforcement of current building codes.	Earthquakes	Columbia Falls, Kalispell, Whitefish	City Planning Depts.;	Moderate	Internal	Ongoing	Medium /High	In Progress.
54	Encourage earthquake drills in schools in Flathead County.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	School Districts, OES;	Little to no cost	Internal	Ongoing	Medium /High	In Progress.
55	Provide public education regarding earthquake awareness.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Little to no cost	Internal	Long Term	High	In Progress.
56	Encourage workplace earthquake drills.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Little to no cost	Internal	Ongoing	Medium /High	In Progress.
57	Continue "Earthquake Preparedness Month" outreach activities during October.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Moderate	Internal	Ongoing	Medium	In Progress.
58	Retrofit bridges and overpasses for seismic stability.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	MDT, County & City Public Works;	Very High	Grants	Ongoing	Low	In Progress. New Bridges are installed at current design standards. - County Identified need to evaluate train trestle S. Hilltop Rd. - Columbia Falls

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
59	Encourage retrofit public utility systems for seismic resistance.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, NWE, Century Link, Flathead Electric, Lincoln Electric;	Very High	Internal	Medium Term	High/Medium	In Progress. Ongoing, as identified - Kalispell Ongoing addressed through building codes for construction permits, and planning and zoning regulations - Whitefish Based on current Building Codes - Columbia Falls
60	Encourage installation of public utility shut off and isolation valves.	Earthquakes	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, NWE, BPA, Flathead Electric, Lincoln Electric;	High	Internal	Medium Term	High/Medium	In Progress. Addressed through State and City Building Permits - County As part of review with design standards - Kalispell Ongoing addressed through building codes for construction permits, and planning and zoning regulations - Whitefish Based on current Building Codes - Columbia Falls
61	Encourage seismic evaluations of dams.	Earthquakes	Flathead County	Dam Owners, DNRC;	Moderate	Internal, Grants	Medium Term	Medium/High	In Progress. High Hazard Dams have an inspection program in place for earthquakes as identified in their EAP's

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
62	Implement slope preservation/ stabilization in slide-prone areas in the public domain.	Landslide	Flathead County, Columbia Falls, Kalispell, Whitefish	City & County Public Works, County Planning and Zoning, City Planning Departments; Montana Department of Transportation.	Very High	Internal, Grants	Ongoing	Medium	<p>In Progress. Monitoring area of concern on the North Fork Road, - County</p> <p>Ongoing as part of evaluation process - Kalispell</p> <p>Ongoing as part of the planning process, and building codes - Whitefish</p> <p>Address in subdivision regulations, visual inspections of areas of concern - Columbia Falls</p>
63	Encourage slope preservation/ stabilization in slide-prone areas on private land.	Landslide	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, County Planning and Zoning, City Planning Departments; Private Landowners	Very High	Grants	Ongoing	Medium	<p>In Progress. Completion of Whitefish Stage bank stabilization project. Agencies are continuing to monitor and evaluate known areas of concern, and respond to evaluate new concerns. - County</p> <p>Ongoing as part of evaluation process - Kalispell</p> <p>Ongoing as part of the planning process, and building codes, landscaping - Whitefish</p> <p>Address in subdivision regulations, visual inspections of areas of concern - Columbia Falls</p>

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
64	Monitor drought conditions.	Drought	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Conservation Districts, City Public Works, DEQ; OES	Little to no cost	Internal	Ongoing	Medium /Medium-High	In Progress.
65	Encourage water conservation by domestic, municipal and industrial users.	Drought	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Conservation Districts, City Public Works, DEQ; OES	Low	Internal	Medium Term	Medium /Medium-High	In Progress. Review and conducted, letters and social media - Kalispell Plans for water conservation due to drought have been developed - Whitefish Evaluate, monitor for any leaks, implement water conservation plan - Columbia Falls
66	Support drought programs implemented through the Conservation District, FSA and MSU extension.	Drought	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Conservation Districts, City Public Works, DEQ; OES, FSA, MSU	Moderate	Internal	Medium Term	Medium /Medium-High	In Progress. Plans for water conservation due to drought have been developed - Whitefish
67	Support the development of Water Shortage Contingency Plans for communities and water systems.	Drought	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, DEQ, Local Water & Sewer Districts, City Public Works, ; OES	Moderate	Internal, Grants	Medium Term	Medium /Medium-High	In Progress. Triggers have been evaluated and implemented - Kalispell Plans for water conservation due to drought have been developed - Whitefish
68	Maintain situational awareness through coordination with DES, DOJ and DHS.	Human Conflict	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Law Enforcement Agencies, Information Technology Departments; OES	Little to no cost	Internal	Ongoing	Medium	In Progress. Partnerships ongoing - Kalispell

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
69	Continue to participate in exercises with Border Patrol and/or Civil Support Team.	Human Conflict	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Kalispell Fire/Regional Hazmat Team; LE Agencies, OES, Public Health	Little to no cost	Internal	Ongoing	Medium	In Progress. Participated in joint training with Civil Support Team in
70	Repair dams and levees, as needed.	Dam Failure	Flathead County, Columbia Falls	Dam Owners, County Public Works, City of Columbia Falls, DNRC, COE, Pacific Corp, Bureau of Reclamation, USACE; Private Landowners	High	Internal, Grants, and Private	Ongoing	Medium /High	In Progress. Biennial levee inspections performed by Corps of Eng. Scheduled for Summer 2023. Flathead County Road & Bridge, and USACE maintain and repair levees that are part of the levee program. Flathead County does have multiple levees that are privately owned that are not part of the levee program. - County Regular inspections of Cedar Creek Dam - Columbia Falls
71	Implement dam failure alert systems.	Dam Failure	Flathead County, Columbia Falls, Kalispell, Whitefish	Dam Owners, OES, City of Columbia Falls, DNRC, COE, Pacific Corp, Bureau of Reclamation, USACE;	Moderate	Grants, Private	Long Term	High	In Progress. Dam Failure Alerts are outlined in each High Hazard Dam EAP, call downs are made, and Public Notifications can be made via Code Red. EAP's are reviewed and updated on a regular basis. Dam failure alert systems are outlined in Cedar Creek Dam EAP, and will utilize CodeRed Emergency Notification Software to notify residents in the inundation area - Columbia Falls
72	Consider using dam inundation as item of consideration in subdivision and critical infrastructure location reviews.	Dam Failure	Flathead County, Columbia Falls, Kalispell, Whitefish	City and County Planning Dept.;	Low	Internal	Medium Term	Medium	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
73	Determine when dams need reclassification.	Dam Failure	Flathead County	OES, DNRC, Dam Owner; OES, County and City GIS Departments, County and City Planning Departments	Low	Internal, Private	Medium Term	Medium	In Progress.
74	Support the development of a volcanic ash contingency plan for surface water treatment and wastewater systems.	Volcanic Ash	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, DEQ, City Public Works, Local Water and Sewer Districts; USGS	Moderate	DEQ, Internal, Grants	Long Term	Medium /Low	In Progress. Ongoing with open tanks at wastewater. - Kalispell
75	Promote public education for emergency preparedness.	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Little to no cost	Internal	Ongoing	High	In Progress. Social Media Posts, Informational Brochures, Preparedness Presentations - County, Kalispell, Whitefish, Columbia Falls

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
76	Utilize social media as outreach for hazard mitigation.	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Little to no cost	Internal	Ongoing	High	In Progress. Social Media Posts - County, Kalispell, Whitefish, Columbia Falls
77	Promote NOAA Weather Radios and Storm Ready Program.	Multi: Dam Failure, Drought, Flooding, Summer Weather, Winter Weather, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Little to no cost	Internal	Ongoing	High	In Progress. Included in public education for emergency preparedness - County, Kalispell, Whitefish, Columbia Falls
78	Promote development of disaster supply kits.	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide,	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Little to no cost	Internal	Ongoing	Medium /High	In Progress. Included in public education for emergency preparedness - County, Kalispell, Whitefish, Columbia Falls

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
		Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire							
79	Confirm capabilities of shelters with Red Cross.	Multi: Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accident, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Public Health;	Little to no cost	Internal	Short Term	Medium /High	In Progress. Capabilities of shelters with Red Cross are evaluated at time of activation. Time of year, number of people impacted, location of disaster, type of disaster, and the number of available volunteers all play into where a shelter will be established, and the capacity. Emergency Shelter Activation requests twice in 2022, with a third pending request based on the ability to bring volunteers in from other Counties if power was not restored within a set time frame.
80	Maintain and update GIS mapping of critical infrastructure.	Multi: Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, GIS; Utilities, Health Care Facilities, Public Works	Low	Internal	Ongoing	High	In Progress.

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
		Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire							
81	Understand the impact of interruption of commodity transport (propane, natural gas).	Hazmat, Transportation Accidents	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, LEPC;	Low	Internal	Medium Term	Medium /High	In Progress.
82	Promote continuity of operations planning.	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Chamber of Commerce;	Low	Internal, Private	Medium Term	Medium /High	In Progress. COOP plans were an identified need for County, Kalispell, Whitefish, and Columbia Falls. Discussion was based on bringing in training/assistance to help develop Continuity of Operations Plans for each jurisdiction

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
83	Support critical infrastructure in conducting vulnerability assessments and developing emergency response plans.	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES;	Low	Internal	Ongoing	Medium /Medium-High	In Progress.
84	Obtain generators for critical facilities and schools.	Multi: Cyber-Attack, Dam Failure, Earthquake, Flooding, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Volcanic Ash, Wildfire	Flathead County, Columbia Falls, Kalispell, Whitefish	OES, Schools, Owners of CF's;	Moderate	Grants, Private	Medium Term	Medium /High	In Progress. IT currently reviewing, WWTP, City Hall - Kalispell

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
85	Widen and replace wooden train trestle at South Hilltop/Jellison Road. Currently South Hilltop Road makes a 90 degree turn and reduces down to a single lane (approx. 11.25 ft. wide) less than ¼ mile from the train trestle over the County Road. Height and width restrictions also make it difficult for a structural ladder fire truck to respond to multi-story structure fires in the urban interface area. Due to the narrow opening County snow plows have difficulty clearing the road of snow due to how narrow the road is and close proximity of the trestle timbers. The train trestle is wooden timbers, with a timber located on both sides of the road and train trestle. If the trestle were to catch fire either from a motor vehicle accident, or wildland/range fire there would be a chemical release into the air due to the creosote timbers. If the wind was coming from the South West, the smoke plume would be in the direct path of Montana Veterans Home, multiple public schools, multiple health care facilities, and directly impact the residents City of Columbia Falls. The proposed project is to widen the County Road to current road standards and to allow for two way traffic, and replace wooden train trestle with a steel train trestle.	Earthquake, Hazmat, Winter Weather, Transportation Accidents, Wildland Fire, Summer Weather, Tornado/Wind	Flathead County	BNSF, Flathead County Road & Bridge, Columbia Falls Fire District, Flathead City County Health Department, Three Rivers EMS, Flathead County OES,	Very High	Private (BNSF), Internal, FEMA HMA Grants	Long Term	Medium	New in 2023
86	Promote 2-1-1 (Essential Community Services) help line and support permanent funding to support the program. 2-1-1 Montana – Northwestern Region Call Center provides 24/7/365 resource information to people in crisis, and during a disaster. 2-1-1 is a critical resource to assist and help protect our socially vulnerable populations. An identified need is to provide training to first responders regarding 2-1-1, and provide the responders with educational	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer	Flathead County	OES, United Way, Kalispell PD, Whitefish PD, Columbia Falls PD, Flathead County Sheriff's Department, Blankenship Fire District, Badrock Fire District,	Little to no cost	FEMA HMA Grants	Short Term	Medium	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
	<p>brochures that could be distributed to people in need. An additional need identified is to provide support for 2-1-1 to obtaining a secure funding source. By educating our first responders on the program they can then provide information to the people they interact with when they respond to incidents. City of Kalispell proposed the project, but training, and educational handouts would be distributed to all response agencies in the County.</p>	<p>Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire</p>		<p>Columbia Falls Fire District, Big Mountain Fire District, Coram/West Glacier Fire District, Creston Fire District, Bigfork Fire District, Evergreen Fire District, Ferndale Fire District, Marion Fire District, Martin City Fire District, Glacier Park Airport Fire, Hungry Horse Fire, Olney Fire, Kalispell Fire, Smith Valley Fire, Lakeside QRU, Somers Fire, South Kalispell Fire, Three Rivers EMS, West Valley Fire, Whitefish Fire, Logan Health, Flathead City-County Health Dept, Flathead County Area on Aging</p>					

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
87	<p>Big Mountain Fire District Egress/Ingress Hazard Mitigation. The Big Mountain Fire District (BMFD) is situated south-facing mid-slope with a single ingress/egress road. The Fire Chief, District BOT and Firewise group have identified a large wildfire as the most significant risk to the district. Properties to our south are Federal and private with some in great need of fuel reduction. At the start of our single access, power lines cross the road nine times. In 2014 the BMFD became a nationally recognized Firewise Community. Since that time great strides have been made to reduce our wildfire risk. Fuel loads have been reduced, emergency response plans created and exercised and emergency bystander communications improved. Our emergency plan identifies the need to shelter in place if our access is impassible. Multiple meetings have been held with Montana DNRC, USFS, BMFD and County professionals and the reduction of fuel loading and the wrapping of power poles or moving overhead power underground were identified as needed mitigation actions. If completed, they would both decrease wildfire intensity and greatly increase the safe egress for people being asked to evacuate when the situation allows.</p>	Wildfire, Summer Weather, Tornado/Wind	Big Mountain Fire District	Big Mountain Fire District, Private Landowners, Flathead Electric	Very High	FEMA HMA Grants	Long Term	High	New in 2023
88	<p>Personal Protective Equipment for Law Enforcement responding to Human Conflict. Equipment each law enforcement patrol vehicle in the county with protective helmets, face shields, personal defense shields and blunt trauma limb, torso, shoulder, abdomen and groin protectors. Having PPE to respond to Human Conflict in each patrol vehicle enables law enforcement to respond directly to the incidents/staging area instead of having to return</p>	Human Conflict	Flathead County	Kalispell PD, Flathead County Sheriff's Office, USFS, USCBP, Montana Highway Patrol	Low	FEMA HMA Grants	Short Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
	to their respective departments to gear up. This direct response could reduce injuries fatalities and property damage. Kalispell PD was the source of this project and felt that the greatest benefit would be to expand all law enforcement agencies that respond in flathead county.								
89	Develop SOP's for Alerts, Warnings, and Messages, and expand authorized agencies and users. Develop SOP's and pre-canned messages to use with IPAWS/WEA, and third party Emergency Alerting Software. Historically the Emergency Notification Software was very limited in what Alerts were sent, what agencies could request alerts, and the number of staff trained to send the alerts. During HMP meetings with each City and County Departments it was determined that there were many different situations in which the software could be utilized such as Boil Water Orders for public water systems, water conservation messaging. This project would allow additional County Departments, and each of the hree Cities to utilize the software. Currently our Emergency Notification Software contract is set to expire in December 2023. Between now and December 2023 identify agencies, and situations that the Emergency Notification Software will be used for, composed pre canned messaging, and develop SOP's for activation and alerting. Identify and obtain FEMA IS-247.b IPA WS certification for new users. Once procurement of a new contract either with our existing vendor or a new vendor is complete, training of the Emergency Notification Software to all authorized users will need to be scheduled. Planning on how to promote and educate the public regarding the benefits of creating a profile with their address will need to	Multi Hazard	Flathead County	OES, Sheriff's Office, Flathead City-County Health Department, Columbia Falls PD, Kalispell PD, Whitefish PD, City and County Public Works,	Moderate	FEMA HMA Grants	Short Term	High	New in 2023

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	be drafted and implemented to complete the project. (This project is supported by Flathead County, Columbia Falls, Kalispell, and Whitefish)								
90	Add a Debris Management Annex to the CMEP. Draft, and Adopt a Debris Management Plan to establish procedures, and guidelines for managing emergency and disaster debris after a major hazard event. This plan will be incorporated into the Comprehensive Emergency Management Plan that is adopted by Flathead County and the Cities of Columbia Falls, Kalispell, and Whitefish. [Development and implementation of a Debris Management Plan will assist with response and recovery activities, reduce the impact to people and the environment, ensures effective use of resources, and helps to control, and minimize costs. Flathead County, Columbia Falls, Kalispell, and Whitefish support this project	Multi Hazard	Flathead County	OES, Solid Waste, Public Health, City and County Public Works	Moderate	FEMA HMA Grants	Short Term	High	New in 2023
91	Human Conflict/Active Threat/Mass Casualty Training and Exercise. Multi-phased project to include joint training for Human Conflict/Active Threat/Mass Casualty incidents with Unified Command between Law Enforcement and Fire/EMS, and building on that training to complete a full scale exercise. Training would be offered to all disciplines and jurisdictions that would be responding to Human Conflict/Active threat incidents and include training for mass casualty response, fatality response, and family reunification. Once training is completed all departments/agencies will participate in a discussion based exercise using the appropriate annexes from the CEMP response plan and SOG's, SOP's to identify gaps. Completion of this project would include conducting a full scale	Human Conflict	Flathead County	Kalispell PD, Whitefish PD, Columbia Falls PD, Flathead County Sheriff's Department, Blankenship Fire District, Badrock Fire District, Columbia Falls Fire District, Big Mountain Fire District, Coram/West Glacier Fire District, Creston Fire District,	Moderate	FEMA HMA Grants	Medium Term	High	New in 2023

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	exercise and updating and revising the CEMP response plan, SOG's and SOP's. This project was discussed and supported by all jurisdictions- flathead county, Columbia falls, Kalispell and whitefish)			Bigfork fire District, Evergreen Fire District, Ferndale Fire District, Marion Fire District, Martin City Fire District, Glacier Park Airport Fire, Hungry Horse Fire, Olney Fire, Kalispell fire, Smith Valley Fire, Lakeside QRU, Somers Fire, South Kalispell Fire, Three Rivers EMS, West Valley Fire, Whitefish Fire, Logan Health, Flathead SAR, North Valley SAR					
92	Air Quality smoke management mitigation. Online permitting system to manage air quality and fire danger concerns in a coordinated effort with multiple agencies.	Wildfire	Flathead County	Public health, OES, Fire	Moderate	FEMA HMA Grants	Short Term	Medium	New in 2023
93	Spruce Park Levy Extension. North end of Rockwork at spruce park the river is cutting to the west. This could cut through and run water to HWY 35. Protects low income and vulnerable populations in a mobile home park.	Flooding	Flathead County	Flathead County	Very High	FEMA HMA Grants, USACE Authorities, Silver Jackets	Medium Term	Medium	New in 2023
94	Implement Zero Trust Security. Improve our cybersecurity stance by not implicitly trusting a user, application or connection, even from a	Cyber Attack	Flathead County	Flathead County IT	High	FEMA HMA Grants	Medium Term	Medium	New in 2023

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	trusted partner or network segment. Zero trust focuses on protecting resources (assets, services, workflows, network accounts, etc.), not network segments. We will reference NIST SP 800-207, for some implementation guidance. We already have some components of a zero trust model in place, but adding the missing pieces is what this project plan is about.								
95	Backup and Disaster Recovery. A backup strategy needs to regularly be tested, modified and improved upon. Our current backup and recovery strategy is dependent on the knowledge of my teams and availability of local I.T. infrastructure. This project improves upon our disaster recovery capabilities by including a truly off-site and complete disaster recovery strategy, through the use of DR as a Service capabilities of the cloud.	Multi: Avalanche, Communicable Disease, Cyber-Attack, Dam Failure, Drought, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents, Volcanic Ash, Wildfire	Flathead County	Flathead county IT and Emergency communications center	Very High	FEMA HMA Grants	Medium Term	Low	New in 2023
96	Physical Map Revisions to Flathead County Floodplain Maps. Complete a study of the floodplain on Ashley Creek west of Kalispell, and on the Stillwater River, the Whitefish River, and Trumbull Creek north of Kalispell and south of Whitefish and Columbia Falls to determine the Base Flood Elevation. Issue/Background: Three cities and county growing in areas without a base flood elevation determined. Benefits: this would include accurate and up to the date information	Flooding	Flathead County	FEMA, Montana DNRC, and Flathead County Planning and Zoning	Moderate	FEMA HMA Grants	Medium Term	Medium	New in 2023

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	to have a sound basis for flood insurance ratings and floodplain management. Would save homeowners and developers money as engineering to determine base flood elevation would not be needed.								
97	Swift Creek Bank Stabilization. Installation of large equipment to stabilize stream bank. Swift creek is eroding stream bank up stream from bridge. Continued erosion would threaten bridge and/or Del Ray Rd.	Flooding	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023
98	Star Meadows Bridge 3. Installation of equipment to stabilize abutment from erosion project will allow continued bridge use without need to shut down for repairs if flooding event occurs.	Flooding	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023
99	Bridge Bank. Stabilization of abutment on bridge using boulders. Project will allow continued bridge usage without need to down for repairs if flooding even occurs	Flooding	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023
100	Spring Prairie- Doc Ingram Bridge. Stabilize abutment to prevent erosion using boulders and concrete. Project will allow continued bridge usage without need to shut down for repairs if flooding event occurs.	Flooding	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023
101	Star Meadows bridge 1. Fix scour under bridge abutment with smaller shot rock or concrete to fill voids under bridge abutment.	Flooding	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023
102	Elevate Old Steel Bridge Road. Rebuild elevate road to mitigate road damage due to flood water.	Flooding	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023
103	Wurtz Slump- NF Road. Stabilize approx. 1000ft of roadway along steep bank ??? water courses stability concerns in wet times of year	Landslide, Wildfire	Flathead County	Road and Bridge	High	FEMA HMA Grants	Medium Term	Medium	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
104	Kelly Camp Area 2021 CWPP Focus Project. Fuels Reduction, Fuel Treatment, HIZ work. there is a need to work with Glacier National Park and adjacent landowners to promote HIZ work and fuels work on private lands and park lands. This area was burned in the Howe Ridge Fire and will need to be evaluated on the danger of dead trees. Evaluate the risk of wild land fire and hazard trees along the roadway that would be used to evacuate the area. This will allow for safe travel into and out of residential areas.	Wildfire	Flathead County	Glacier National Park, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
105	North End of Lake MacDonald 2021 CWPP Focus Project. Fuels Reduction, Fuel Treatment, HIZ work. There is a need to work with Glacier National Park and adjacent landowners to promote HIZ work and fuels work on private lands and park lands. Evaluate the risk of wildland fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas.	Wildfire	Flathead County	Glacier National Park, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
106	Grist Road Area 2021 CWPP Focus Project. Fuels Reduction, Fuel Treatment, HIZ work. There is a need to work with Glacier National Park and adjacent landowners to promote HIZ work and fuels work on private lands and park lands. Evaluate the risk of wildland fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas.	Wildfire	Flathead County	Glacier National Park, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
107	<p>Teakettle Mountain 2021 CWPP Focus Project. Fuels Reduction. Fuel Treatment, HIZ Work. Reduce fuel loads that would support large fast fire build up that could move up the mountain and spot on the east side. Evaluate the risk of Wildland fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. there is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems. There is a need for landscape fuels reduction on Teakettle Mountain to break up the fuel continuity to limit the buildup of large fire that could spot onto the east side of the mountain off of Rabe Road and Teakettle Road.</p>	Wildfire	Flathead County	USFS, MT-DNRC, Flathead County FSA, Columbia Falls Rural Fire District, Blankenship Fire District	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
108	<p>Swan Mountain Range from Bigfork North to the lake Blaine area and the base of the mountain on Foothills Road 2021 CWPP Focus Project. Fuels Reduction, Fuels Treatment, HIZ Work. Reduce fuel loads that would support large fast fire build up that could move north and south along the mountain. There is a need for landscape fuels reduction on the mountain range to create a mosaic pattern to break up the continuance fuels. Evaluate the risk of wildland fire along roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems with a</p>	Wildfire	Flathead County	USFS, MT-DNRC, Badrock Fire District, Creston Fire District, Bigfork Fire District, IF emdale Fire District, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
	mosaic timber pattern at the base of the mountain.								
109	Lion Lake Area 2021 CWPP Focus Project. Fuels Reduction, Fuel Treatment, HIZ work. Reduce fuel loads that would support large fast fire build up that could move into the WUI. There is a need for landscape fuels reduction in both areas to create a mosaic pattern to break up the continuance fuels. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems.	Wildfire	Flathead County	USFS, MT-DNRC, Bad.rock Fire District, Creston Fire District, Bigfork Fire District, Ferndale Fire District, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
110	Teakettle Mountain 2021 CWPP Focus Project. Fuels Reduction. HIZ Work. There are some large lodgepole timber stands in the area that need landscape treatment to reduce fire intensity. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems.	Wildfire	Flathead County	USFS, MT-DNRC, Flathead County FSA, Coram/West Glacier Fire District	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
111	Hungry Horse Dam to North End of Columbia Mountain 2021 CWPP Focus Project. Fuels Reduction, Fuel Treatment, HIZ Work. Reduce fuel loads that would support large fast fire build up that could move up the mountain and spot on the east side. There is a need for landscape fuels reduction on Columbia Mountain south to around the Hungry Horse Dam area to prevent fire from damaging power lines, HWY 2, and lateral movement of fire across Columbia Mountain. With no roads, this area will be a challenge. Prescribed fire would be the most cost effective. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems with a mosaic timber pattern at the base of the mountain.	Wildfire	Flathead County	USFS, MT-DNRC, Badrock Fire District, Hungry Horse Fire District	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
112	Private land from Somers to Lake County line adjacent to US Forest Service Island Unit (blacktail Mountain area) 2021 CWPP Focus Project. fuels Reduction, HIZ work. USFS has completed a substantial amount of work in this area and is planning more. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems.	Wildfire	Flathead County	USFS, Somers Fire District, MT-DNRC, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
113	<p>Haskill Basin to Columbia Falls 2021 CWPP Focus Project. fuels Reduction. Fuel Treatment, HIZ Work !The USFS has plans in place for work on the Haskill Basin watershed. These need to be supported and expanded. The area is in an historic wildfire path. The Half Moon Fire ran from between Whitefish and Columbia Falls then east into the Middle Fork area past West Glacier.</p> <p>Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems.</p>	Wildfire	Flathead County	USFS, MT-DNRC, Flathead County FSA, Whitefish FSA, Columbia Falls Rural Fire [District, Blankenship Fire District	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
114	<p>Lands Uphill from Whitefish Lake to Whitefish Mountain 2021 CWPP Focus Project. Fuels Reduction. Fuel Treatment, HIZ Work. The area has a south aspect and steep slopes that will increase the behavior of a wildland fire. The road to Whitefish Mountain is the only access in or out for residents and visitors. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need for landscape timber treatments on large sections, HIZ around structures, and fuels reduction on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems with a mosaic timber pattern.</p>	Wildfire	Flathead County	USFS, MT-DNRC, Big Mountain Fire District, Whitefish FSA, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
115	Trail Creek to Canadian Border 2021 CWPP Focus Project. fuels Reduction. Fuel Treatment, HIZ Work. USFS and DNRC have completed a substantial amount of work in this area and are planning more. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems with a mosaic timber pattern. Evaluate the risk of wild land fire along Trail Creek Road and Red Meadows Road. These roads could be used to evacuate the area, look for places that need fuels treatment to provide for safe evacuation.	Wildfire	Flathead County	USFS, MT-DNRC, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
116	Happy Valley 2021 CWPP Focus Project. Fuels Reduction and HIZ work around structures. There is heavy timber with a high live to dead ratio intermixed with homes in the area. Recommend working with homeowners on HIZ work around structures and fuel reductions along driveways. Fuel reductions reduce fire intensity and promote healthy forest ecosystems. When HIZ and fuel reductions projects are linked together the protection increases for the community	Wildfire	Flathead County	Whitefish FSA, West Valley Fire District, MT DNRC, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
117	Tally Lake Area/ Bootjack Lake area 2021 CWPP Focus Project. fuels Reduction, Fuel Treatment, HIZ work. USFS and DNRC have completed a substantial amount of work in this area and are planning more. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to	Wildfire	Flathead County	USFS, Whitefish FSA MT-DNRC, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
	reduce fire intensity and enhance healthy forest ecosystems.					Fund (CWDG)			
118	Kuhns Wildland Management Area 2021 CWPP Focus Project, Fuel Reduction. The lands around the Kuhns Wildland Management Area (KWMA-State Land) are private with structures and agriculture fields that would be threatened if a fire starts in the KWMA. Evaluate the area to determine the risk level that wildfire presents to the property and adjacent properties. Prepare fuel reductions project to reduce fire intensity and enhance healthy forest ecosystems.	Wildfire	Flathead County	MT-DNRC	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
119	Roads that run into the mountains that have homes along them. Example Rhodes draw, Truman creek, McMannamy Draw and Browns Meadow 2021 CWPP Focus Project. Fuels Reduction, Fuel Treatment, HIZ work . Fuel treatment is needed along roads and driveways. These roads are examples of roads in Area 2 that start in the valley and move up hill with homes along the length of the road. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need for landscape timber treatments on large sections, HIZ around structures, and fuels reduction on private lands to reduce fire intensity and enhance healthy forest ecosystems.	Wildfire	Flathead County	USFS, Somers Fire District, Smith Valley Fire District, West Valley Fire District, Marion Fire District, Olney Fire District, South Kalispell Fire District, Whitefish FSA MT-DNRC, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
120	KM Ranch Road/Spencer Lake are 2021 CWPP Focus Project. Fuels Reduction. DNRC has completed a substantial amount of work in this area on the state land and is planning more. There is a need to work with the adjacent landowners to promote HIZ work and fuels work	Wildfire	Flathead County	MT-DNRC	Moderate	FEMA HMA Grants, USDA Community Wildfire	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
	on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems					Defense Fund (CWDG)			
121	Beaver Lake Area 2021 CWPP Focus Project. fuels Reduction. Fuel Treatment, HIZ Work. DNRC has completed a substantial amount of work in this area and is planning more. Evaluate the risk of wild land fire along the roadway that would be used to evacuate the area. Depending on the slope and the fuels, thin 20 to 50 feet on each side of the roadway for safe travel into and out of residential areas. There is a need to work with the adjacent landowners to promote HIZ work and fuels work on private lands and agency lands to reduce fire intensity and enhance healthy forest ecosystems.	Wildfire	Flathead County	USFS, MT-DNRC, Big Mountain Fire District, Whitefish FSA, Flathead County FSA	Moderate	FEMA HMA Grants, USDA Community Wildfire Defense Fund (CWDG)	Medium Term	High	New in 2023
122	Cyber Attack. Continue monitoring all city IT functions and systems to ensure 1. System integrity 2. system continuity 3 Data protection	Cyber Attack	City of Columbia Falls	City Administration , Finance, Public Works, Police, Fire	Moderate	FEMA HMA Grants	Ongoing	Medium	New in 2023
123	Flooding- Pre-Mitigation. Based on Recent flooding, rivers edge park area requires pre-mitigation, soil erosion control. Rivers Edge Park has lost over 20 feet of bank along with the neighboring property(north). Additionally evaluate the need for flooding mitigation for Lift station #8 at south nudens ave.	Flooding	City of Columbia Falls	City Public works and county OES	Moderate	FEMA HMA Grants	Short Term	High	New in 2023
124	Earthquake. Require earthquake drills in government buildings in the city of Columbia falls	Earthquake	City of Columbia Falls	Columbia Falls	Little to no cost	Existing Budgets, Staff Time	Ongoing	Medium	New in 2023
125	Severe Summer Weather. Participate in Flathead County social media outreach for severe weather events	Summer Weather, Winter Weather	City of Columbia Falls	OES	Little to no cost	Existing Budgets, Staff Time	Ongoing	Medium	New in 2023
126	Severe Winter Weather. Participate in Flathead County social media outreach for severe weather events	Summer Weather, Winter Weather	City of Columbia Falls	OES	Little to no cost	Existing Budgets, Staff Time	Ongoing	Medium	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
127	Transportation Accidents. Have turn signals (green, amber, red) functioning at HWY 2 Hilltop and HWY 2, and Meadowlake to prevent additional crashes	Transportation Accidents	City of Columbia Falls	City of C Falls, MDDT, State of Montana	High	FEMA HMA Grants	Short Term	Medium	New in 2023
128	Human Conflict. Meet with other local, state and federal law enforcement agencies to plan, train, and equip officers for the potential of civil unrest incidents	Human Conflict	City of Columbia Falls	Local, State, and Federal LE Agencies	Low	FEMA HMA Grants	Short Term	Medium	New in 2023
129	Wildland/Rangeland Fire. Participate and evaluate the public on defensible space in high danger areas	Wildfire	City of Columbia Falls	Flathead county/ columbia falls fire dept	Low	FEMA HMA Grants	Ongoing	High	New in 2023
130	Hazmat Incidents. Obtain and make available tv 11 reports that show all High hazard, high volume storage facilities within our jurisdiction	Hazmat	City of Columbia Falls		Low	Existing Budgets, Staff Time	Ongoing	High	New in 2023
131	Bioreactor covers @ WWTP. Produce cover for bioreactor @ WWTO to prevent ash from entering ponds.	Volcanic Ash	City of Columbia Falls	Sewer/OES	High	FEMA HMA Grants, BRIC	Medium Term	Low	New in 2023
132	Drought. Community outreach program to communicate level of emergency and plan to help mitigate. Ex Implement watering program for irrigation to only happen on odd/even days by house #	Drought	City of Columbia Falls	Water/DNRC	Moderate	FEMA HMA Grants	Short Term	High	New in 2023
133	Dam Failure. Rid dam of all weeds and vegetation. spread topsoil over entire dam and seed with wildland mix to help with erosion	Dam Failure	City of Columbia Falls	Water/DNRC	Moderate		Short Term	Medium	New in 2023
134	Hazmat-Transportation Accidents. Develop move assisting agencies for response/backfill and evacuation if an extensive hazmat incident	Hazmat	Kalispell	Kalispell Fire, city of kalispell, OES identified mutual aid partners	Moderate	FEMA HMA Grants	Short Term	High	New in 2023
135	Wildland and Rangeland Fire. Trauma components for engineers on engine operator courses	Wildfire	Kalispell	Kalispell Fire, OES, DNRC	Moderate	FEMA HMA Grants	Short Term	Medium	New in 2023
136	Wildland Urban Interface. Wildland type brush truck	Wildfire	Kalispell	Kalispell Fire dept	High	FEMA HMA Grants	Medium Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
137	Procure and install a generator to support IT. Servers that support city departments including police, fire, and water customers are at the city hall building. Finance and payroll are also at city hall. The city phones will be run through the data cables/internet. All departments will be impacted with lack of servers, phones and services to the public impacted. Adding a generator to the server room will reduce risk of downtime to the IT environment.	Cyber Attack	Kalispell	IT	Moderate	FEMA HMA Grants, State Grant Funding, Local Budgets	Medium Term	High	New in 2023
138	Tank Coverage for Clarifiers at Kalispell Advances Wastewater Treatment Plant. Open tanks are susceptible to pollutant impacts from volcanic ash. The Clarifiers are a critical component of the treatment process and the introduction of pollutants can disrupt the treatment process, causing the treatment plant to pollute Ashley Creek. Protective covers would eliminate atmospheric exposure to volcanic ash.	Communicable Disease	Kalispell	Kalispell Public Works	Very High	FEMA HMA Grants, State Grant Funding, Local Budgets	Short Term	Medium	New in 2023
139	Backup Generators at Kalispell Advances Wastewater Treatment Plant (WWTP). Loss of power disenable the plant to pump, mix and discharge treated and untreated sewage. During extended power outages the treatment process fails, and the flooding of raw sewage is inevitable. Having backup generation for specific phases of the process will allow the process to maintain a level of operation and treatment thus preventing untreated sewage from entering the stream.	Communicable Disease	Kalispell	Kalispell Public Works	Very High	FEMA HMA Grants, State Grant Funding, Local Budgets	Short Term	High	New in 2023
140	Evergreen Drive Road Reconstruct with Slope Stabilization. Evergreen Drive is an major arterial connector that residents use daily to travel for the Evergreen areas at Hwy 2 to Whitefish Stage Road. The hill section starting just each of Whitefish stage in built down a bluff know for slope settling and failure. surface cracking in the	Transportation Accidents	Kalispell	Kalispell Public Works	Very High	FEMA HMA Grants, State Grant Funding,	Short Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
	asphalt indicated areas of settling over the past several years. Road improvement and permanent slope repairs will promote the safe travels of tens of thousands of residents and ensure travel corridor for emergency responders					Local Budgets			
141	Meridian Basin Flooding. A large stormwater system on the west side of Kalispell that collects and conveys stormwater from Hwy 93 at Summit Drive west to Meridian and south to Center Street. In total the drainage basin serves 699 urban acres. An increased in impervious areas has increased runoff and the conveyance system is at or above capacity. Flood during significant storm events occurs a low areas creating damage to private and public properties and inhibits street usage during the flood events. Strategically placed flood control facilities will correct the flooding issue allowing the water to be conveyed to the downstream flood control structure without causing damage or disrupting the transportation system	Flooding	Kalispell	Kalispell Public Works	Very High	USACE authorities , Silver Jackets	Short Term	Medium	New in 2023
142	Four Mile Drive Road Reconstruct and Stormwater System Update. Four Mile Drive is an major east-west arterial connector that residents use daily to travel from the West Valley areas to Stillwater Road. The one mile road section between Farm to Market Road and Stillwater Road is gravel and annually has flood waters overtopping road sections. Road improvements and construction of a current stormwater system promote the safe travels of tens of thousands of residents and ensure travel corridor for emergency responders.	Flooding	Kalispell	Kalispell Public Works	Very High	USACE authorities , Silver Jackets	Short Term	High	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
143	Property for Snow Storage. Wintertime in Kalispell requires snow plowing operations and snow removal from the traveling corridors. During heavy winter snow years snow removal is essential to maintain transportation systems, however snow storage areas are limited for Kalispell.	Transportation Accidents	Kalispell	Kalispell Public Works	Very High	FEMA HMA Grants, State Grant Funding, Local Budgets	Short Term	Medium	New in 2023
144	Update and Improve Public Water Supply Source in floodplain of Stillwater river. The City of Kalispell owns and operates an artesian spring public water source located within the flood plain of the Stillwater River. The facility is aged and compromised each year from the flooding of the river during the spring season. This water supply is an essential component of the city's water system that serves the Kalispell community of 26,000. Disruption of the PWS inhibits Kalispell ability to provide water to all users and ensure fire flows can be achieved.	Communicable Disease	Kalispell	Kalispell Public Works	Very High	FEMA HMA Grants, State Grant Funding, Local Budgets	Short Term	High	New in 2023
145	Mobile Electronic Reader Boards. During significant transportation accidents the scenes can be chaotic, and create dangerous situations. Having mobile warning signs with detailed information and flashing warnings is imperative to keep the traveling public and responders safe.	Transportation Accidents	Kalispell	Kalispell Public Works	Moderate	FEMA HMA Grants, State Grant Funding, Local Budgets	Short Term	Medium	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
146	Network Cybersecurity Monitoring. Current the City has extremely limited ability to monitor, detect, or respond to network issues. IT is not able to identify and respond to any possible network intrusions. IT requires a service, that utilizes AI to Prevent, Detect, Respond and Heal the City network and well as City Email and other software. Dark Trace would allow 24/7 /365 monitoring of the entire City network including all devices connected. Darktrace also will monitor the City SCADA systems used by both Water Treatment and Wastewater Treatment. Along with the City's Microsoft services providing IT a full and comprehensive ability to know at anytime what is going on and respond to any, potential threat within seconds. DarkTrace will provide hardened security inside and outside of the City Network, Detect and see attacks instantly, Respond and disarm within seconds and Heal by restoring devices back to health. See attached DarkTrace Overview. This will allow the City to provide the best continuity of services for both employees and the public.	Cyber Attack	Whitefish	City IT	Moderate	FEMA HMA Grants, State Grant Funding, Local Budgets	Short Term	High	New in 2023
147	USAR Collapse Trench Reserve Team. High Risk/Low Frequency event. Training and equipment for initial response to USAR type equipment and staffing	Multi: Avalanche, Dam Failure, Earthquake, Flooding, Hazmat, Landslide, Summer Weather, Winter Weather, Human Conflict, Tornado/Wind, Transportation Accidents,	Whitefish	OES, County fire departments, joint team and equipment training	Moderate	FEMA HMA Grants, State Grant Funding, Local Budgets	Medium Term	Low	New in 2023

ID	Action Name & Description	Hazards Mitigated	Jurisdictions	Lead Agency and Partners	Cost Estimate	Potential Funding	Timeline	Priority	Status & Implementation Notes
		Volcanic Ash, Wildfire							
148	Uncontrolled Railroad Crossing. BNSF @ Birch Point and @ Lufer Rd in WFSA. Evacuation.	Transportation Accidents	Whitefish	BNSF, Flathead County Road & Bridge	Low	BNSF Funding, Local Budgets	Short Term	Medium	New in 2023
149	Birch Point Evac Plan. develop evacuation plan for birch point based on assessment of properties impacted	Wildfire	Whitefish	Whitefish Fire Department	Low	Local Funding, Staff Time	Short Term	High	New in 2023
150	Residential Design Recommendations for earthquakes. Encourage engineer design for all residential construction within city limits to mitigate damage.	Earthquake	Whitefish	Building	Low	FEMA HMA Grants	Short Term	High	New in 2023
151	Landscaping ordinance update. Updating landscaping ordinance to require a majority of plants to be drought resistant.	Drought	Whitefish	City of Whitefish planning office	Low	Local Funding, Staff Time	Short Term	Medium	New in 2023
152	Enrollment in FEMA CRS Program. Join and get rated in community rating system to reduce flood risk. This includes education component ongoing for community	Flooding	Whitefish	Planning office	Low	Local Funding, Staff Time	Short Term	High	New in 2023
153	Study Groundwater Source. Feasibility study for drinking water wells to provide potable water in the even of a volcanic ash event or wildfire that takes out surface water source.	Volcanic Ash	Whitefish	Public works	High	FEMA HMA Grants	Short Term	Medium	New in 2023

E.7 Plan Implementation and Maintenance

Moving forward the Flathead 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.

E.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:

Flathead County:

- Flathead County Hazard Mitigation Plan, 2014
- Flathead County Growth Policy, 2020
- Flathead County Flood Insurance Study, 2015
- Flathead County Zoning Regulations, 2022
- Flathead County Subdivision Regulations, 2022
- Lake and Lakeshore Protection Regulations
- Flathead County Floodplain and Floodway Management Regulations, 2016

City of Columbia Falls:

- City of Columbia Falls Capital Improvements Plan
- City of Columbia Falls Growth Policy, 2019
- City of Columbia Falls Zoning Code 2020
- City of Columbia Falls Subdivision Regulations 2020

City of Kalispell:

- Downtown Plan
- Core Area Plan
- Kalispell Growth Policy Plan It – 2035
- Move 2040 Transportation Plan
- Wastewater Facility Plan Update
- Water Facility Update
- City of Kalispell Floodplain Management Ordinance, 2022
- City of Kalispell Subdivision Regulations

City of Whitefish:

- City of Whitefish Growth Policy
- Extension of Services Plan
- Downtown Business District Master Plan
- Whitefish Strategic Housing Plan, 2017
- Connect Whitefish Bicycle & Pedestrian Master Plan
- 2022 Transportation Plan
- Whitefish Floodplain Ordinance
- Climate Action Plan

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.

E.7.2 Monitoring, Evaluation and Updating the Plan

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

DRAFT