

Wyoming Region 5 Hazard Mitigation Plan 2023-2028



Fremont County Annex

Wyoming Region 5
Hazard Mitigation Plan

2023-2028

1 Mitigation Planning and Fremont County Planning Team

This County Annex builds upon previous versions of the Fremont County Multi-Hazard Mitigation Plan that were incorporated into the regional hazard mitigation plan completed in 2017. The plan is the result of a collaborative effort between Fremont County Government, municipal governments, citizens, public agencies, non-profit organizations, and the private sector. Fremont County Emergency Management was responsible for updating the plan in coordination with a multi-jurisdictional County Planning Team/Hazard Mitigation Planning Committee (HMPC) during the update of the 2022 Regional Plan. The following jurisdictions were provided the opportunity to participate in the planning process:

- Town of Dubois
- Town of Hudson
- City of Lander
- Town of Pavillion
- City of Riverton
- Town of Shoshoni

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, as well as how the public was involved during the 2022 update. Additional details on the local government departments and stakeholders that were invited to participate, including titles of representatives, are listed in Appendix C of the base plan. The City of Riverton and towns of Pavillion and Shoshoni declined to participate as adopting jurisdictions in the 2022 regional plan update process. Details and mitigation actions related to these jurisdictions have been carried forward from the 2017 regional plan, should participation be desired in future update cycles.

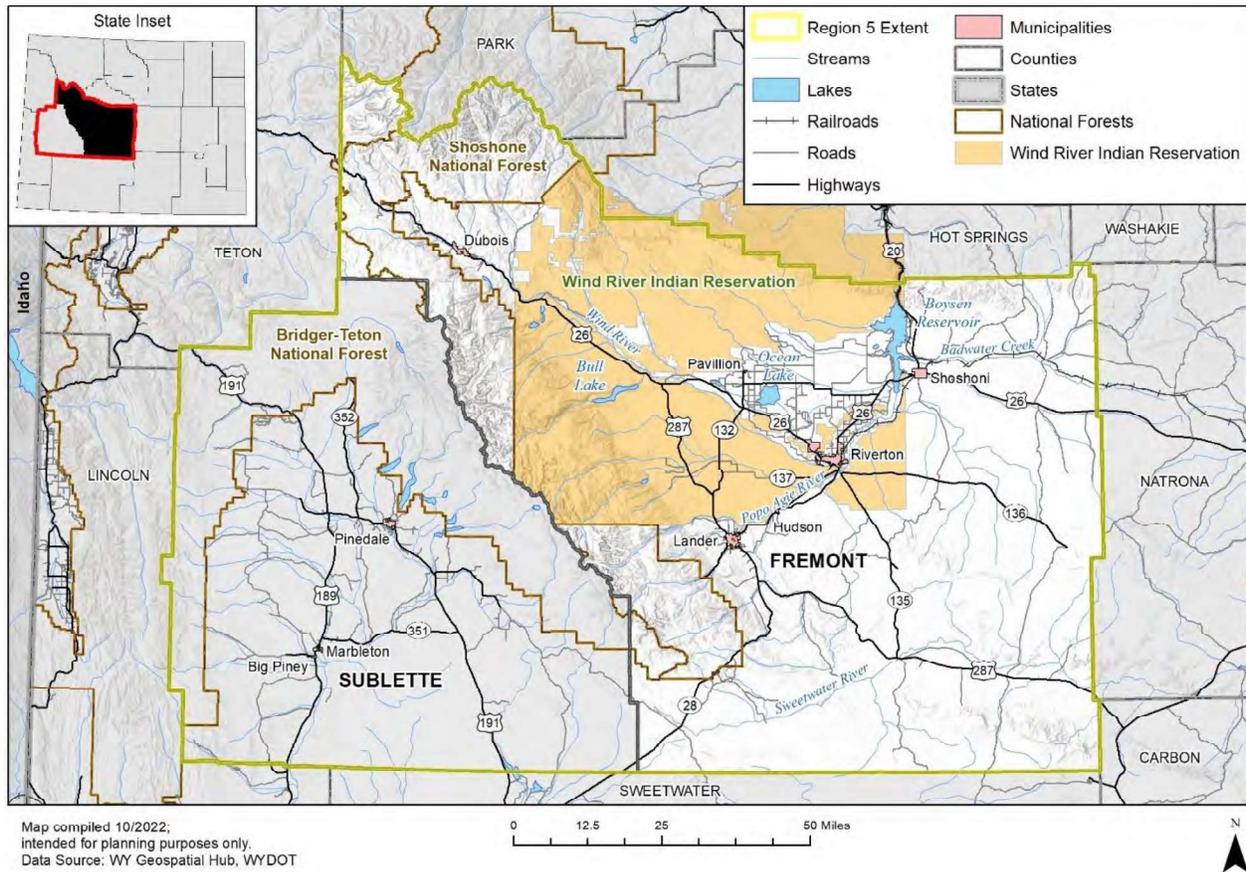
2 Geography and Climate

Much of Fremont County is made up of the 9,266 square mile Wind River Basin. This basin is typical of other large sedimentary and structural basins in the Rocky Mountain West. Broad belts of folded and faulted mountain ranges surround the basin. These ranges include the Wind River Range on the west, the Washakie Range and Owl Creeks and southern Big Horn Mountains on the north, the Casper Arch on the east, and the Granite Mountains on the south.

Fremont County is characterized by dramatic elevation changes. Surface elevations range from 13,783 feet above sea level on Gannett Peak, which is the highest point in Wyoming, to 4,800 feet on the Sand Mesa west of Boysen Reservoir. Although there is nearly 9,000 feet separation between the highest and lowest elevations in the County the average elevation is 5,500 feet.

According to the Koppen climate classification system, the city of Riverton has a cold semi-arid climate. Average temperatures at the Riverton climate station range from a summer high of 85°F to a winter low of 4.1°F. Temperature extremes range from a record high of 104°F to a record low of -46°F. Precipitation in the county varies from 60 inches per year on Gannett Peak to 8 inches per year in the central basin area of the Fremont County around Shoshoni and Riverton. Most of the inhabited area of the County receives between 8 and 14 inches of rain per year. Although not enough precipitation falls in the warmer months for adequate natural growth of crops, a tremendous amount of precipitation is accumulated in the mountains in the form of snow. Water is allocated to users on a "first in time, first in right" system.

Figure 1 Fremont County Base Map



3 Population Trends

As of the 2020 United States Census, there were a total of 39,234 people living in Fremont County. The population has remained relatively stable, with a slight decrease in population over the decade. The 2021 population was estimated to be 39,336. The County seat is the City of Lander.

Table 1 Population Estimates for Communities 2015-2020

	2010 Census	2015 Estimate	2016 Estimate	2017 Estimate	2018 Estimate	2019 Estimate	2020 Census
County Total	40,222	40,261	40,250	39,865	39,656	39,467	39,234
Town of Dubois	971	780	812	768	741	842	911
Town of Hudson	458	517	510	465	498	446	417
City of Lander	7,487	7,758	7,744	7,683	7,621	7,555	7,558
Town of Pavillion	226	244	226	220	219	194	231
City of Riverton	10,682	10,915	11,044	11,113	11,069	10,891	10,696

	2010 Census	2015 Estimate	2016 Estimate	2017 Estimate	2018 Estimate	2019 Estimate	2020 Census
Town of Shoshoni	649	530	546	508	505	515	471

Source: American Factfinder, U.S. Census www.census.gov

Select Census demographic and social characteristics for Fremont County are shown in the table below. The table indicates the proportion of the population that may have special needs, such as the elderly or children under 5 years of age.

Table 2 Fremont County Demographic Profile

Fremont County	
Population	
Population Estimates, July 1, 2021	39,336
Population, Percent Change- April 1, 2020 (estimates base) to July 1, 2021	0.3%
Population, Census, April 1, 2020	39,234
Persons Under 5 Years, Percent, 2020	6.2%
Persons Under 18 Years, Percent, 2020	25.3%
Persons 65 Years and Over, Percent, 2020	19.6%
Female Persons, Percent, 2020	49.4%
White Alone, Percent, 2020	73.5%
Black or African American Alone, Percent	0.6%
American Indian and Alaska Native Alone, Percent	22.1%
Asian Alone, Percent	0.5%
Native Hawaiian and Other Pacific Islander Alone, Percent	-
Two or More Races, Percent	3.2%
Hispanic or Latino, Percent	7.8%
White Alone, Not Hispanic or Latino, Percent	69.1%
High School Graduate or Higher, Percent of Persons Age 25 Years+	91.8%
Bachelor's Degree or Higher, Percent of Persons Age 25 Years+	24.8%

Source: U.S. Census Bureau www.census.gov/

*Hispanic or Latino is considered to be an ethnicity and not a race. People who identify themselves as Hispanic or Latino can belong to one or more races. Therefore, the total percentage can be greater than 100%.

4 Development Trends

The largest incoming populations are those looking for a retirement or vacation home in the mountains where they can enjoy the outdoors. Development across the County is not uniform, and it is organized in some areas and random in others. The City of Lander, Town of Pavillion, City of Riverton, and Town of Shoshoni have seen slight population growth over the past decade, but all other jurisdictions have seen a decrease in population.

The HMPC noted that the downturn in the oil and gas industry in 2015 and ongoing has resulted in lower growth and loss of tax revenues. Limited or minimal codes do not allow control over what is developing in the County's urban and rural areas. With respect to hazards, future construction will likely increase overall exposure to earthquakes, winter storms, hail, and wind and fire in some wildland urban interface areas. New construction in Riverton and Lander could place buildings in dam failure inundation zones as well. The

HMPC also noted in 2022 that aging infrastructure in small towns with limited funding opportunities for repairs is a growing concern in the County. The HMPC also noted the unincorporated forested and riverine areas of Fremont County have become quite attractive in recent years due to proximity to outdoor activities and distance from major cities. This has created residential construction in areas that are fire and flood prone but have little or no regulation. Many of these areas are serviced by only one well maintained road which inhibits access by EMS or Fire personnel.

5 Economy

According to the U.S. Census Bureau 2020, the largest industry employer is educational services, health care, and social assistance, which employs nearly 30% of the entire workforce. The agriculture and mining industry also employs a significant portion of the population and is a major source of revenue in the County. As of the 2017 USDA Census of Agriculture, Fremont County had 1,152 farms. Fremont County has 1,165,154 acres in agriculture, which is a 32% decrease from the 2012 Census. Fremont County is ranked fourth in Wyoming in total value of crops and ninth in total livestock, poultry, and products production. Crops account for 41% of the total sales in Fremont County and livestock, poultry, and products account for 59%.

According to Mineral Answers, Fremont County is the number one producer for barrels of oil equivalent (BOE) per day as of July 2022. Additionally, Fremont County is ranked as 17 in total producers nationally. There are 2,024 total wells in the County, 880 of which are producing. In 2021, 9,038,281 BBLs of oil were produced and 456,153,677 MCFs of gas in Fremont County. The County income from the gas and oil industry was reported at \$1.27 billion.

Table 3 Fremont County Economic Profile

Characteristic	Fremont County
In Civilian Labor Force, Total, Percent of Population Age 16 Years+, 2016-2020	61.0%
In Civilian Labor Force, Female, Percent of Population Age 16 Years+, 2016-2020	56.8%
Total Accommodation and Food Services Sales, 2017 (\$1,000) (c)	127,721
Total Health Care and Social Assistance Receipts/Revenue, 2017	175,517
Total Transportation and warehousing receipts/revenue, 2017 (\$1,000) (c)	59,891
Total Retail Sales, 2017 (\$1,000) (c)	618,001
Total Retail Sales per capita, 2017 (\$1,000) (c)	\$15,502
Median Household Income (in 2020 dollars), 2016-2020	\$54,291
Per Capita Income in Past 12 Months (in 2020 Dollars), 2016-2020	\$27,475
Persons in Poverty, Percent	15.0%
Total Employer Establishments, 2020	1,243
Total Employment 2020	9,889
Total Annual Payroll, 2020	384,492
Total Employment, Percent Change 2019-2020	-0.9%
Total Non-employer Establishments, 2019	3,045

Source: U.S. Census Bureau www.census.gov/

Visitors traveling to and throughout Wyoming represent an important component of the State's, including Fremont County's, economy. Travel originating in domestic and international markets generates valuable business sales, payroll, employment, and tax receipts for the State as well as for local jurisdictions. Further, many locations within Fremont County serve as travel destinations, for both Wyoming residents and out-

of-state visitors. These areas accordingly consider travel and tourism a primary industry. The County, Lander, Dubois, and Riverton all benefit from tourism revenue.

6 Hazard Identification and Risk Assessment

6.1 Identified Hazards

The HMPC reviewed the hazards from the 2017 Fremont County Hazard Mitigation Plan for inclusion in the 2022 Regional hazard mitigation plan. The hazards list was compared with the hazards list found in the State of Wyoming’s hazard mitigation plan, updated in 2020. The following table notes the summary of significance for each jurisdiction in the County based on a combination of geographic extent, likelihood and potential and magnitude/severity.

Table 4 Overall Hazard Significance* Summary Table

Hazard	County	Dubois	Hudson	Lander	Pavillion	Riverton	Shoshoni
Avalanche	Low	Low	Low	Low	Low	Low	Low
Dam Failure	Low	Low	High	High	Low	High	Low
Drought	High	High	High	High	High	High	High
Earthquake	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Expansive Soil	Low	Low	Low	Low	Low	Low	Low
Extreme Cold	Low	Low	Low	Low	Low	Low	Low
Flood	High	High	High	High	Low	High	Low
Hail	High	High	High	High	High	High	High
Hazardous Materials	Medium	Low	Medium	Medium	Low	Medium	Medium
High Winds	High	High	High	High	Medium	High	Medium
Landslide	Medium	Medium	Low	Medium	Low	Low	Low
Lightning	High	High	High	High	High	High	High
Mine Subsidence	Low	Low	Low	Low	Low	Low	Low
Severe Winter Weather	High	High	High	High	High	High	High
Tornado	Low	Low	Low	Low	Low	Low	Low
Wildfire	High	High	Medium	High	Low	High	Low

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

Geographic Extent

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

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

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

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

Potential Magnitude/Severity

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

Limited: 10 to 25 percent of property is severely damaged, facilities and services are unavailable between 1 and 7 days, injuries and illnesses require sophisticated medical support that does not strain the response capability of the jurisdiction, or results in very few permanent disabilities.

Critical: 25 to 50 percent of property is severely damaged, facilities and services are unavailable or severely hindered for 1 to 2 weeks, injuries and illnesses overwhelm medical support for a brief period of time, or result in many permanent disabilities and a few deaths.

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.

Probability of Future Occurrences

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

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

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

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

Overall Significance

Low: Two or more of the criteria fall in the lower classifications or the event has a minimal impact on the planning area. This rating is also sometimes used for hazards with a minimal or unknown record of occurrences/impacts or for hazards with minimal mitigation potential.

Medium: The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is also sometimes utilized for hazards with a high impact rating but an extremely low occurrence rating.

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.

6.1.1 Hazards Considered but Not Profiled

This plan does not further evaluate the following hazards:

- Civil Disobedience
- Electrical Power Failure
- Urban Fire
- Pandemic
- Windblown Deposits
- Volcanism and Yellowstone Volcanic Explosion

It is important to be aware of the probability of these events and the associated impacts for Fremont County, however, the hazard identification described in Chapter 4 of the base plan omits these hazards due to the limited relevance in the regional context of this plan or being addressed in other planning mechanisms. Some of the above hazards are acknowledged in other hazard profiles, such as electrical power failure due to lightning, wind and winter storms. For example, power outage is not identified as an individual hazard because it is generally a consequence associated with other greater hazard events. Additionally, volcanism and a Yellowstone volcanic explosion has been excluded due to the low probability of occurrence combined with the very minimal opportunities/resources to mitigate. Windblown deposits include sands that can be mobilized by wind during extended drought but is not considered to be a significant hazard. Pandemic was considered due to the ongoing Covid-19 Pandemic, but it was determined that the hazard is covered under existing public health plans and thus not profiled further.

6.2 Building Inventory and Assets

In addition to people, structures, critical facilities and infrastructure, and other important assets in Fremont County are potentially exposed to hazards identified in this plan. Table 5 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 their respective websites which include an on-line map and data for download. This information 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. Abstract Codes were used to identify occupancy type as shown in the following table, which includes summations of total improved value for the various property types.

Table 5 Fremont County Building Inventory and Value by Jurisdiction

Jurisdiction	Improved Parcels	Improved Value	Est. Content Value	Total Exposure
Dubois	778	\$156,080,200	\$87,986,017	\$244,066,217
Hudson	324	\$25,219,726	\$13,901,215	\$39,120,941
Lander	3,066	\$607,870,710	\$374,064,970	\$981,935,680
Pavillion	116	\$5,568,780	\$2,997,570	\$8,566,350
Riverton	4,458	\$774,536,856	\$470,540,220	\$1,245,077,076
Shoshoni	473	\$45,096,261	\$25,457,355	\$70,553,616
Unincorporated	10,648	\$1,896,930,431	\$1,022,891,803	\$2,919,822,234
Total	19,863	\$3,511,302,964	\$1,997,839,149	\$5,509,142,113

Source: Wyoming CAMA 2021, Wood GIS Analysis

Total building exposure within Fremont County based on an analysis of improved parcels is more than \$5.5 billion, with over \$3.5 billion in improved value properties and close to \$2.0 billion of contents at-risk. Using GIS, parcels are assessed using tax lot data, while building counts are derived from address point locations. The unincorporated areas have the greatest total exposure with nearly \$3.0 billion, followed by Riverton with a total exposure of over \$1.2 billion.

Table 6 Fremont County Building Inventory and Value by Jurisdiction and Property Type

Jurisdiction	Property Type	Improved Parcels	Improved Value	Est. Content Value	Total Exposure
Dubois	Agricultural	3	\$7,425	\$7,425	\$14,850
	Commercial	92	\$19,884,408	\$19,884,408	\$39,768,816
	Residential	683	\$136,188,367	\$68,094,184	\$204,282,551
	Total	778	\$156,080,200	\$87,986,017	\$244,066,217
Hudson	Agricultural	1	\$1,797	\$1,797	\$3,594
	Commercial	28	\$2,580,907	\$2,580,907	\$5,161,814
	Residential	295	\$22,637,022	\$11,318,511	\$33,955,533
	Total	324	\$25,219,726	\$13,901,215	\$39,120,941
Lander	Agricultural	5	\$17,073	\$17,073	\$34,146
	Commercial	269	\$140,242,157	\$140,242,157	\$280,484,314
	Residential	2,792	\$467,611,480	\$233,805,740	\$701,417,220
	Total	3,066	\$607,870,710	\$374,064,970	\$981,935,680
Pavillion	Agricultural	1	\$5,883	\$5,883	\$11,766

Jurisdiction	Property Type	Improved Parcels	Improved Value	Est. Content Value	Total Exposure
	Commercial	6	\$420,476	\$420,476	\$840,952
	Residential	109	\$5,142,421	\$2,571,211	\$7,713,632
	Total	116	\$5,568,780	\$2,997,570	\$8,566,350
Riverton	Agricultural	5	\$113,834	\$113,834	\$227,668
	Commercial	446	\$166,429,750	\$166,429,750	\$332,859,500
	Residential	4,007	\$607,993,272	\$303,996,636	\$911,989,908
	Total	4,458	\$774,536,856	\$470,540,220	\$1,245,077,076
Shoshoni	Agricultural	2	\$7,427	\$7,427	\$14,854
	Commercial	56	\$5,811,021	\$5,811,021	\$11,622,042
	Residential	415	\$39,277,813	\$19,638,907	\$58,916,720
	Total	473	\$45,096,261	\$25,457,355	\$70,553,616
Unincorporated	Agricultural	50	\$971,238	\$971,238	\$1,942,476
	Commercial	805	\$147,881,937	\$147,881,937	\$295,763,874
	Residential	9,793	\$1,748,077,256	\$874,038,628	\$2,622,115,884
	Total	10,648	\$1,896,930,431	\$1,022,891,803	\$2,919,822,234
	Grand Total	19,863	\$3,511,302,964	\$1,997,839,149	\$5,509,142,113

Source: Wyoming CAMA 2021, Wood GIS Analysis

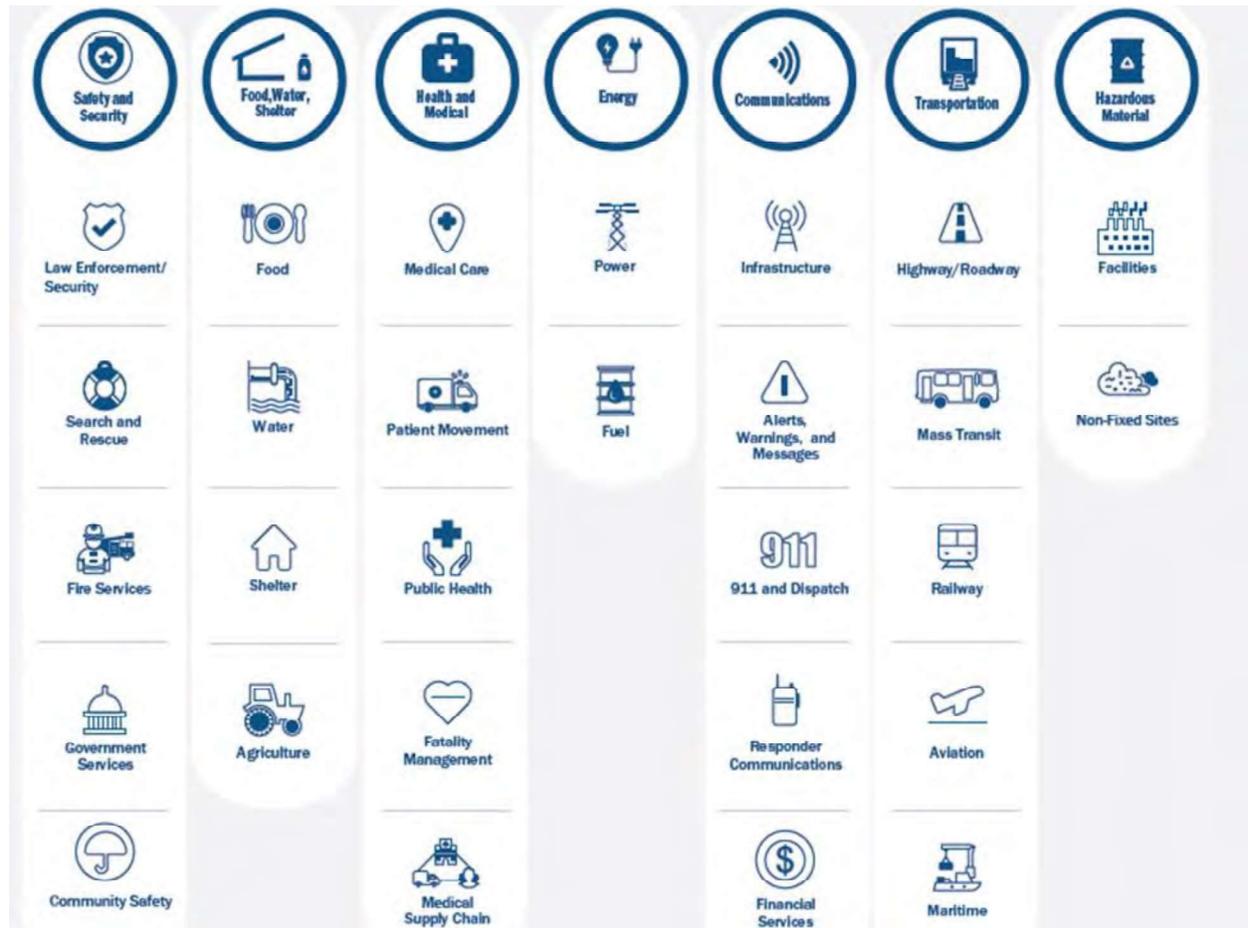
Of the \$5.5 billion of total building exposure, residential properties represent the greatest portion of structures, accounting for \$4.5 billion (82.4%), followed by \$966 million of commercial properties (17.5%), and \$2.2 million of agriculture (0.04%).

6.2.1 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) and Wyoming State Assets, with supplementation from the HMPC. Where applicable, this information was used in an overlay analysis for hazards such as flood, landslide, and wildfire.

FEMA organizes critical facilities into seven lifeline categories as shown in Figure 2.

Figure 2 FEMA Lifeline Categories



Source: FEMA

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

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

Table 7 summarizes critical facility counts in Fremont County, by jurisdiction, as provided by the County, Homeland Infrastructure Foundation-Level Data (HIFLD), National Bridge Inventory (NBI), and the Wyoming State Assets.

Table 8 examines the distribution of critical facilities across each individual jurisdiction.

Table 7 Fremont County Total Facilities by Jurisdiction and FEMA Lifeline

Jurisdiction	Communications	Energy	Food, Water, Shelter	Hazardous Material	Health and Medical	Safety and Security	Transportation	Total
Dubois	2	1	-	-	1	7	7	18
Hudson	-	1	-	-	-	1	1	3
Lander	23	1	-	-	4	24	5	57
Pavillion	5	-	-	-	-	5	-	10
Riverton	85	3	4	-	6	29	8	135
Shoshoni	2	-	-	-	-	5	-	7
Unincorporated	476	71	1	8	1	32	159	748
Total	593	77	5	8	12	103	180	978

Source: Wyoming, HIFLD, NBI, WY State Assets, Wood GIS Analysis

Table 8 Fremont County Critical Facilities by Jurisdiction

Jurisdiction	Facility Type	Facility Count
Dubois	Communications	2
Dubois	Energy	1
Dubois	Health and Medical	1
Dubois	Safety and Security	7
Dubois	Transportation	7
Hudson	Energy	1
Hudson	Safety and Security	1
Hudson	Transportation	1
Lander	Communications	23
Lander	Energy	1
Lander	Health and Medical	4
Lander	Safety and Security	24
Lander	Transportation	5
Pavillion	Communications	5
Pavillion	Safety and Security	5
Riverton	Communications	85
Riverton	Energy	3
Riverton	Food, Water, Shelter	4
Riverton	Health and Medical	6
Riverton	Safety and Security	29
Riverton	Transportation	8
Shoshoni	Communications	2

Jurisdiction	Facility Type	Facility Count
Shoshoni	Safety and Security	5
Fremont Unincorporated	Communications	476
Fremont Unincorporated	Energy	71
Fremont Unincorporated	Food, Water, Shelter	1
Fremont Unincorporated	Hazardous Material	8
Fremont Unincorporated	Health and Medical	1
Fremont Unincorporated	Safety and Security	31
Fremont Unincorporated	Transportation	159
Fremont Unincorporated	Other - Cultural Resources	1

Source: Wyoming, HIFLD, NBI, WY State Assets, Wood GIS Analysis

Table 9 through Table 17 display the valuation of select critical facilities where known, sorted by jurisdiction and function. Note that critical infrastructure will continue to change as the municipalities and elected officials change. Any municipality's governing body may change their definition and considerations of what is "critical infrastructure".

Table 9 Fremont County Public Facilities

Facility	Location	Valuation
Ambulance Station	Lander – N. 1st Street	\$ 1,069,568
	Riverton – 1052 Petersdorf Drive	\$ 1,165,210
	Dubois- 706 Mechem	\$ 424,817
County Courthouse	450 N. 2nd	\$ 13,885,000
Detention Center / Dispatch Center	460 Railroad	\$ 10,212,310
Public Health Nurse	Riverton- 322 N. 8 th West	\$ 529,245
Roads Shop	Riverton – 4421 Skylane Ave	\$ 1,007,215
	Pavillion – 201 E. Dallas	\$ 576,537
	Lander – 1580 US Highway 287	\$ 1,529,340
Solid Waste Location	Sand Draw – 743 Sand Draw Road	\$ 263,175*
	Baling Station – 542 North Smith Road	\$ 339,000*
	Lander – 52 Beebe Road	\$ 893,042*

Table 10 Lander Public Facilities

Facility	Location	Valuation
City Hall	240 Lincoln	\$ 894,775
Fire Station	430 Garfield	\$ 946,554
Hospital – Lander Regional	1320 Bishop Randall Drive	\$ 14,529,623
Police Department	240 Lincoln	With City Hall
Public Works	125 Buena Vista Dr	\$ 1,802,186**
Wastewater Treatment	100 Industrial Park Road	\$ 897,750

Table 11 Riverton Public Facilities

Facility	Location	Valuation
Animal Shelter	515 S. Smith Road	No data
City Hall	816 North Federal	\$ 4,142,958
Fire Station	404 South Broadway	\$ 1,646,509
Hospital – Riverton Memorial	2100 West Sunset	\$ 7,084,232
Maintenance Shop	714 W. Monroe	\$ 434,887
Police Department	816 North Federal	With City Hall
Wastewater Treatment	2600 East Monroe	\$ 1,208,190
Water Treatment Plant	1015 N. Hill Street	\$ 863,350

Table 12 Shoshoni Public Facilities

Facility	Location	Valuation
City Hall	212 Idaho	\$ 456,005
Police Department	102 East 2 nd Street	
Public Works	S. Maple	\$ 512,292

Table 13 Hudson Public Facilities

Facility	Location	Valuation
Town Hall	333 S. Main Street	\$ 239,068
Public Works	256 S. Main Street	\$ 105,509
Water Department	6 th & Oklahoma	\$ 55,025
Water Treatment (Lagoon)	Old Hwy 789	\$ 169,130

Table 14 Dubois Public Facilities

Facility	Location	Valuation
Fire Department	107 Horse Creek Road	\$ 1,067,697
Town Hall	712 Meckem	\$ 2,140,398
Town Shop	208 D. Street	\$ 172,580

Table 15 Pavillion Public Facilities

Facility	Location	Valuation
Town Hall	203 ½ North Main	\$ 90,439
Water Storage Facilities	314 N. Pine 2 tanks located on North Pavillion Road near S & S Wood Products	\$ 28,498

Table 16 Fremont Fire Districts

Facility	Location	Valuation
Fremont County Fire Protection District	305 South Smith Road, Riverton	\$ 841,456

Facility	Location	Valuation
FCFPD Shop	E. Monroe	\$ 299,557
Lysite	30 Wyoming Street, Lysite	\$ 351,242
Lander Rural – Station #1	280 Tulip Street, Lander	\$ 233,664
Lander Rural – Station #2	14 Lower North Fork Road, Lander	\$ 172,926
Missouri Valley	330 Missouri Valley Road	\$ 1,544,400
Morton/Kinnear	11521 Hwy 26, Kinnear	\$ 1,196,000
Crowheart	8531 Hwy 26, Crowheart	\$ 255,076
Pavillion	390 West Center Ave, Pavillion	\$ 368,580
Midvale- Station #1	1554 Missouri Valley Road	\$ 211,064
Midvale – Station #2	10 Lost Wells Circle	\$ 58,493
Atlantic City	46 Dexter Ave, Atlantic City	\$ 290,367
North Portal Cottonwood	653 North Portal Road	\$ 121,903
Ft. Washakie	385 Old Wind River Hwy	Unknown
Hudson	33 South Main, Hudson	\$ 239,068***
Shoshoni	104 E. 2nd Street Shoshoni	\$ 480,000

Table 17 Fremont Education Centers

Facility	Location	Valuation
Arapaho School District #38	445 Little Wind River Bottom Road, Arapaho	
Ashgrove Elementary	510 N. 1 st Street, Riverton	\$ 7,146,892
Aspen Park Elementary	1620 E. Sunset Drive, Riverton	\$ 12,008,968
Baldwin Creek Elementary	350 Smith Street, Lander	
Crowheart School	8434 Hwy 26, Crowheart	\$ 310,495
Dubois K-12 School	700 N 1 st , Dubois	\$ 69,752,288
Dubois High School	314 Helmer Street, Dubois	
Frontier Academy	2002 W. Sunset, Riverton	\$ 1,998,911
Jackson Elementary	720 W. Jackson, Riverton	\$ 6,426,997
Jeffrey City Elementary	375 Bob Adams Ave, Lander	
Lander Valley High School	350 Baldwin Creek Road, Lander	\$ 22,827,369
Gannett Peak Elementary	615 Popo Agie, Lander	
Ft. Washakie Elementary	90 Ethete Road, Ft. Washakie	
Ft. Washakie High School	90 Ethete Road, Ft. Washakie	
Lander Middle School	755 Jefferson, Lander	
Pathfinder High School	8204 Hwy 789, Lander	Included in Training School
Rendezvous Elementary	413 N. 4 th Street West, Riverton	\$ 14,528,119
Riverton High School	2001 W. Sunset Drive, Riverton	\$ 46,884,642
Riverton Middle School	840 Major Ave, Riverton	\$ 22,901,499
Shoshoni Elementary & High School	404 Wrangler Way, Shoshoni	\$ 3,357,486
Gannett Same as Above	615 Popo Agie Street, Lander	\$ 2,552,115
St. Margaret's School	220 N 7th Street East, Riverton	

Facility	Location	Valuation
St. Stephens Indian School	134 Mission Road, Wind River Indian Reservation	
Starrett Junior High School	863 Sweetwater, Lander	\$ 7,131,636
Trinity Lutheran School	419 E. Park, Riverton	
Willow Creek Elementary	2002 W. Sunset, Riverton	\$ 12,116,893
Wind River Middle – High School & Elementary	1994 Cougar Drive, Pavillion	\$ 12,842,767
Wyoming Indian Elementary	23 Coolidge Street, Wind River Indian Reservation	
Wyoming Indian High School	636 Hwy 132, Wind River Indian Reservation	
Wyoming Indian Middle School	531 Ethete Road, Wind River Indian Reservation	
	Higher Education	
Central Wyoming College	1660 Peck Ave, Riverton	
Wyoming Catholic College	306 Main Street, Lander	
Wind River Job Corps	4200 Airport Road, Riverton	
Wind River Tribal Community College	533 Ethete Road, Ethete	

* Land value only

** Combined value of water treatment and public works shop

*** Includes City Hall value

+ Value listed on insurance purchased by municipalities

Note: All values are for structural replacement costs, at fair market values, provided by the Fremont County Assessor's Office and Insurance values and does not reflect content and equipment replacement costs.

6.2.2 Natural, Historic, and Cultural Assets

Assessing the vulnerability of Fremont County to disasters 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 disaster, 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 Resources

By definition, a historic property not only includes buildings of other types of structures, such as bridges and dams, but also includes Native American sites, roads, byways, historic landscapes, and many other features. Given the history of the County, these types of historic properties exist in the planning area.

Information about historic assets in Fremont County came from the following sources:

- The **National Register of Historic Places** is the Nation's official list of cultural resources worthy of preservation. The National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. Properties listed

include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

Table 18 lists the properties and districts in Fremont County that are on the National Register of Historic Places.

Table 18 Fremont County Historic Properties

Site	Jurisdiction
Atlantic City Mercantile	Atlantic City
Hamilton City	Atlantic City
Carpenter Hotel Historic District	Atlantic City
ELS Bridge over Big Wind River	Dubois
Brooks Lake Lodge	Dubois
Welty's General Store	Dubois
Torrey Lake Club/Ranch Historic District	Dubois
Diamond A Ranch	Dubois
CM Ranch and Simpson Lake Cabins	Dubois
Torrey Lake Petroglyph District	Dubois
Twin Pines Lodge and Cabin Camp	Dubois
T Cross Ranch Rural Historic District	Dubois
Helen Lookingbill Site	Dubois
High Rise Village	Dubois
BMU Bridge over Wind River	Ethete
St. Michael's Mission	Ethete
Shoshone-Episcopal Mission	Fort Washakie
Fort Washakie Historic District	Fort Washakie
Wind River Agency Blockhouse	Ft. Washakie
Dean Decker Site	Honeycomb Buttes
Lander Downtown Historic District	Lander
US Post Office and Courthouse--Lander Main	Lander
Jackson Park Town Site Addition Brick Row	Lander
Castle Gardens Petroglyph Site	Moneta
ELY Wind River Diversion Dam Bridge	Morton
Delfelder Schoolhouse	Riverton
Riverton Railroad Depot	Riverton
Quien Sabe Ranch	Shoshoni
King, C. H., Company, and First National Bank of Shoshoni	Shoshoni
South Pass	South Pass City
South Pass City Historic District	South Pass City
South Pass City Historic District (Boundary Increase)	South Pass City
Split Rock Prehistoric Site (48FR1484)	Split Rock Ranch
Green Mountain Arrow Site (48FR96)	Stratton Rim
Union Pass	Unknown

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

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. Wetlands reduce flood peaks and slowly release floodwaters to downstream areas. When surface runoff is dampened, the erosive powers of the water are greatly diminished. Furthermore, the reduction in the velocity of inflowing water as it passes through a wetland helps remove sediment being transported by the water. They also provide drought relief in water-scarce areas where the relationship between water storage and streamflow regulation are vital.

Endangered Species

To further understand natural resources that may be particularly vulnerable to a hazard event, as well as those that need consideration when implementing mitigation activities, it is important to identify at-risk species (i.e., endangered species) in the planning area. An endangered species is any species of fish, plant life, or wildlife that is in danger of extinction throughout all or most of its range. A threatened species is a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Both endangered and threatened species are protected by law and any future hazard mitigation projects are subject to these laws. Candidate species are plants and animals that have been proposed as endangered or threatened but are not currently listed.

There are ten federally recognized endangered, threatened, or candidate species in Fremont County according to the U.S. Fish and Wildlife Service. These species are listed in Table 19 along with State listed species.

Table 19 Endangered and Threatened Species in Fremont County

Common Name	Scientific Name	Type of Species	Status
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Bird	Recovery
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Bird	Threatened
Whitebark Pine	<i>Pinus albicaulis</i>	Conifers and Cycad	Candidate
Fremont County Rockcress	<i>Boechera pusilla</i>	Flowering Plant	Candidate
Ute ladies'-Tresses	<i>Spiranthes diluvialis</i>	Flowering Plant	Threatened
Desert Yellowhead	<i>Yermo xanthocephalus</i>	Flowering Plant	Threatened
Grizzly Bear	<i>Ursus arctos horribilis</i>	Mammal	Threatened Under Review
Black-footed Ferret	<i>Mustela nigripes</i>	Mammal	Endangered
Gray Wolf	<i>Canis lupus</i>	Mammal	Recovery
Canada Lynx	<i>Lynx canadensis</i>	Mammal	Threatened
North American Wolverine	<i>Gulo luscus</i>	Mammal	Proposed Threatened

Source: <http://www.fws.gov/endangered/>

6.3 Vulnerability to Specific Hazards

This section details vulnerability to specific hazards, where quantifiable, only where it differs from that of the Region. 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.

6.3.1 Avalanche

Avalanches affect a limited spatial area in the Region and are even less significant in Fremont County since most avalanches occur in the western part of the State along the Teton Range. There are no known critical facilities in avalanche prone areas, and buildings/infrastructure are scarce in the more mountainous/rural areas of Fremont County. The primary risk associated with this hazard is related to public safety. Avalanches affect a small number of people, such as snowboarders, skiers, and hikers, who venture into backcountry areas during or after winter storms. However, Fremont does have an extensive list of outdoor recreation opportunities, and many residents and visitors will continue to be exposed to avalanche hazards in mountainous areas. The overall significance of this hazard is low across the County and does not vary between the jurisdictions.

6.3.2 Dam Failure

There are thirteen high hazard dams and six significant hazard dams located upstream from population centers in Fremont County. The table below identifies the dams and the affected communities (participating in this plan).

Table 20 High and Significant Level Dams in Fremont County by Jurisdiction

Hazard Level	Dam Name	Nearby City
High	Enterprise	Lander
High	Pilot Butte	Riverton
High	Pilot Butte Embankment 3	Riverton
High	Pilot Butte Embankment 2	Riverton
High	Ray Lake	Lander
High	Bull Lake	Riverton
High	Worthen Meadows	Lander
Significant	Christina	Lander
Significant	Grandy	Dubois

With nine high or significant hazard dams in the planning area, dam failure could cause flooding in the future.

- Of the County's jurisdictions, Lander and Riverton are at increased risk. In particular, the Pilot Butte Embankment dams (3 total) are of concern due to the proximity to Riverton. The HMPC also noted areas above Bull Lake that are more vulnerable.

6.3.3 Drought

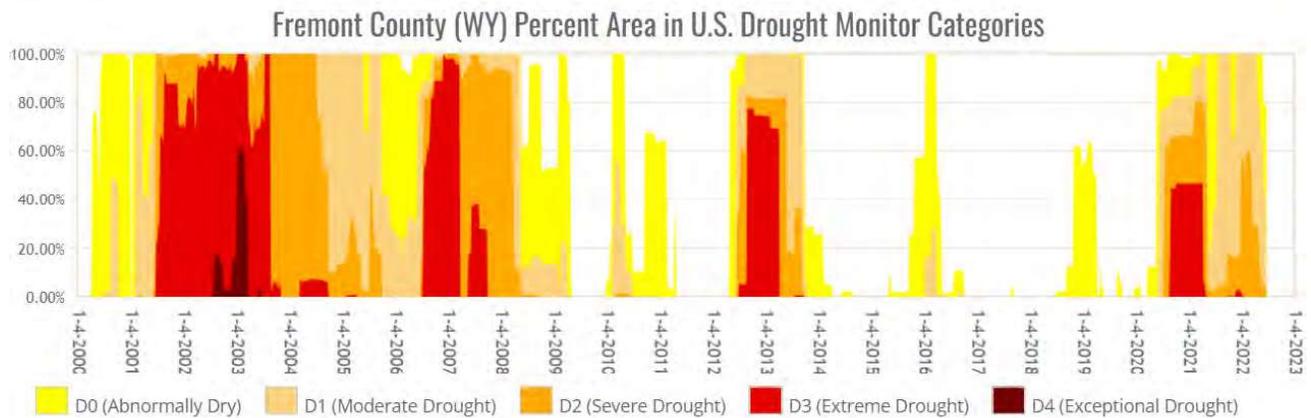
Like the rest of the Region, drought is a high-significance hazard for the County. Since 2012 there have been 15 USDA Disaster Designations in Fremont County for drought. According to the U.S. Drought Monitor records for Fremont County, in the 1,147-week period from 2000 through 2021, the county spent 890 weeks (78% of the time) in Abnormally Dry (D0) conditions. Approximately 57% of the time, or 658 weeks, was spent in Moderate Drought (D1) conditions. Weeks in drought between 2000 and 2020 are summarized in Table 21 and shown in time series from January 2000 and May 31, 2022, in Figure 3.

Table 21 Fremont County Weeks in Drought by Intensity, 2000-2021

Category	Description	Palmer Drought Severity Index (PDSI)	Standardized Precipitation Index (SPI)	Fremont County Weeks in Drought, 2000-2021
D0	Abnormally Dry	-1.0 to -1.9	-0.5 to -0.7	890
D1	Moderate Drought	-2.0 to -2.9	-0.8 to -1.2	658
D2	Severe Drought	-3.0 to -3.9	-1.3 to -1.5	505
D3	Extreme Drought	-4.0 to -4.9	-1.6 to -1.9	318
D4	Exceptional Drought	-5.0 or less	-2.0 or less	47

Source: U.S. Drought Monitor

Figure 3 Fremont County Drought Intensity, 2000-May 31, 2022



Source: U.S. Drought Monitor

Vulnerability is tempered somewhat by the County being a headwaters area. The snowpack in the Wind River Range helps feed rivers, lakes and streams during normal years, but can be affected by dry, low snowpack years. Drought-related impacts to the local economy can be extensive to tourism and industry from increased wildfire danger, forest closures and fire bans.

The overall significance of drought is consistently high throughout Fremont County and across jurisdictions. Wortham Meadow Dam provides part of the City of Lander's water supply. Refer to the Chapter 4 in the Base Plan for additional discussion of drought risk related to the Region and the County.

6.3.4 Earthquake

Fremont County has a long history of earthquakes, some of which have caused property damage. Most earthquakes experienced in the County are not felt by anyone due to a combination of the sparse population and the magnitude of the earthquake.

- Multiple earthquakes occur each year in the Beaver Rim or Jeffrey City.
- A hot spring is located near Ft. Washakie (this is in conjunction with hot springs located in Hot Springs County to the north of Fremont County.)
- There are numerous active fault lines located in Fremont County. The South Granite Mountain fault system is located in southeastern Fremont County and northwestern Carbon County. The fault system is composed of several west-northwest-trending faults that border the northern flanks of the Seminoe Mountains, Ferris Mountain, Green Mountain, and Crooks Mountain. The Stagner Creek fault system is an east-west trending system near Boysen Reservoir on the Owl Creek uplift's south flank. The Cedar Ridge/Dry Fork fault system is present in northeastern Fremont County and northwestern Natrona County. For these fault systems, the maximum credible earthquakes are determined to be between a magnitude of 6.5 and 6.75.
- Arapahoe, Dubois, Hudson, Lander, Pavillion, Riverton, and Shoshoni are all listed within intensity VII earthquake areas. In intensity VII earthquakes, damage is negligible in buildings of good design and construction, slight-to-moderate in well-built ordinary structures, considerable in poorly built or badly designed structures such as un-reinforced masonry buildings. Some chimneys will be broken.
- It is estimated that in a 2,500-year earthquake event (2% probability of being exceeded in 50 years), Fremont County would sustain \$137 million in total losses. In this scenario, Fremont County is ranked 6th in Wyoming when comparing damages and fatalities across the State. More detailed data analysis regarding HAZUS scenario results, exposure, and earthquake vulnerability is outlined in Chapter 4 of the base plan.

Over thirty magnitude 2.0 or intensity III and greater earthquakes have been recorded in Fremont County. The following paragraphs describe several past events of note, either because they caused damage or were significant enough to be noticeable, which occurred in Fremont County:

The first earthquake that was reported in Fremont County occurred on December 10, 1873. This earthquake, which was located in the southern part of the county near Atlantic City, was felt as an intensity III event at nearby Camp Stambaugh. On January 22, 1889, an intensity III-IV earthquake was reported near Lander. An intensity IV earthquake also occurred in the Lander area on November 21, 1895. People reported that houses were jarred and dishes rattled.

On August 11, 1916, an earthquake occurred in the Sand Draw/Gas Hills area. No damage was reported from this intensity III event, which was centered approximately 6 miles south of Jeffrey City.

Two earthquakes were reported in Fremont County in the 1920s. The first occurred on December 12, 1923, when an intensity V earthquake was detected approximately three miles west-northwest of Atlantic City. No significant damage was reported. This area experienced another non-damaging, intensity III earthquake on October 30, 1925.

Only one earthquake was reported in the county in the 1930s. On November 23, 1934, an intensity V earthquake was reported approximately 20 miles northwest of Lander. Residents in a 10-mile radius around Lander reported that dishes were thrown from cupboards and pictures fell from walls. Buildings in two business blocks were cracked, and the brick chimney of the Fremont County Courthouse was moved two inches away from the building. The earthquake was felt as far away as Rock Springs and Green River.

No earthquakes were reported in Fremont County in the 1940s, but several were reported in the county in the 1950s. On August 17, 1950, an intensity IV earthquake occurred approximately 2.5 miles south-southeast of Lander. It caused loose objects to rattle and buildings to creak. Intensity II and intensity IV earthquakes occurred in the same area on January 11, 1954 and December 13, 1955, respectively. No damage was reported from either event. On August 22, 1959, an intensity IV earthquake was detected approximately 3.5

miles west-northwest of Atlantic City. No damage was associated with this earthquake. A few days later, an earthquake was recorded on August 25, 1959. This event, which was located just southeast of Fort Washakie, was later determined to be non-tectonic in origin.

On October 12, 1961, a small-magnitude earthquake was detected approximately seven miles northwest of Pavillion. Two earthquakes were recorded in northern Fremont County on April 26, 1967. A magnitude 4.7 event and a magnitude 4.2 event occurred approximately 32 miles southwest and approximately 38 miles west-southwest of Thermopolis, respectively. No damage was associated with any of the earthquakes that occurred in the county in the 1960s.

Several earthquakes were reported in Fremont County in the 1970s. The first occurred on April 22, 1973, approximately 12 miles north of Jeffrey City. This magnitude 4.8, intensity V earthquake rattled dishes and disturbed pictures on walls in Jeffrey City. A small earthquake occurred on June 14, 1973, approximately eight miles east-northeast of Lander. This event was later determined to be the result of an explosion in the area. On March 25, 1975, a magnitude 4.8, intensity II earthquake was detected approximately 18 miles northwest of Jeffrey City. A mobile home located 35 miles southeast of Riverton was moved an inch off its foundation by this earthquake. A magnitude 3.5 earthquake occurred on December 19, 1975, approximately 25 miles northeast of Jeffrey City. This earthquake did not cause any damage. Later that same month, on December 30, 1975, an earthquake of no specific magnitude or intensity was recorded in eastern Fremont County, approximately 27 miles east-southeast of Riverton. No one reported feeling this event.

Four earthquakes were reported in the county in the 1980s. On January 28, 1980, a magnitude 2.8 earthquake was recorded in the northwestern part of the county, approximately 28 miles northwest of Dubois. This earthquake was not felt. A magnitude 3.1 earthquake occurred on September 4, 1980, approximately 15 miles west-southwest of Atlantic City. No damage was reported. A magnitude 3.2, intensity IV earthquake occurred in Fremont County on August 31, 1982. No significant damage was reported from this earthquake, which was centered approximately 10 miles southwest of Lander. On November 3, 1984, a magnitude 5.1, intensity VI earthquake was detected approximately 10 miles northwest of Atlantic City. The earthquake was felt in Lander, Dubois, Atlantic City, and Casper. Residents in Lander and Atlantic City reported cracked walls, foundations, and windows. This event was one of the largest earthquakes to occur in the southwestern quarter of the state. The last earthquake to occur in Fremont County in the 1980s took place on August 16, 1985. This magnitude 4.3, intensity IV event occurred approximately 25 miles southeast of Jeffrey City. No damage was associated with this earthquake.

On August 7, 1991, a magnitude 3.5 earthquake was recorded in northern Fremont County, approximately 35 miles southwest of Thermopolis. Residents of Thermopolis reported feeling this non-damaging earthquake. Another non-damaging earthquake occurred on January 31, 1992, approximately 20 miles northwest of Lander. Area residents reported feeling this magnitude 2.8 event. On October 10, 1992, a magnitude 4.0, intensity III earthquake was detected approximately 22 miles east of Lander. Again, people in the area felt this earthquake, but no damage was reported from it. A magnitude 3.8, intensity III earthquake occurred near Bairoil on June 1, 1993, approximately 17 miles southeast of Jeffrey City. No damage was reported. On August 22, 1993, a magnitude 3.1 earthquake was recorded in northwestern Fremont County, approximately 14 miles west-northwest of Dubois. No one reported feeling this earthquake. A magnitude 3.4 earthquake occurred approximately 11 miles southeast of Jeffrey City on December 11, 1996. Again, no damage was associated with this earthquake. This earthquake was followed by another non-damaging, magnitude 3.1 event on April 25, 1997. No one felt this earthquake that was centered approximately 10 miles south of Lander. Lander city officials reported, however, that the earthquake may have caused a crack in the city's water tank, releasing 600,000 gallons of water. On July 21,

1999, another magnitude 3.1 earthquake occurred approximately 23 miles southeast of Lander. No one reported feeling this event.

On August 19, 2000, an earthquake was reported approximately 25 miles west-northwest of Jeffrey City. Area residents reported feeling this magnitude 3.2 earthquake. Most recently, a magnitude 3.0 earthquake occurred on November 8, 2000, in northeastern Fremont County. This event was centered approximately 29.5 miles southeast of Thermopolis. No one reported feeling this earthquake.

6.3.5 Expansive Soils

The Fremont County HMPC stated that there were no known issues of expansive soils in the County, but that they were aware of areas where expansive soils occur, including north of Riverton. Potential for swelling is predominantly moderate for the County and associated impacts are negligible. While there are areas of potential risk that are identified, the Fremont HMPC indicated that this hazard presents little to no impact. Overall, expansive soils are a low significance hazard across the County. Lander and the unincorporated areas around the Lander Valley area are slightly more vulnerable to and the map included in Chapter 4 of the base plan identifies areas where the soil has a moderate risk of expansion. The chapter also includes more information on the location of various soil types, probability of expansion, and exposed building values.

6.3.6 Extreme Cold

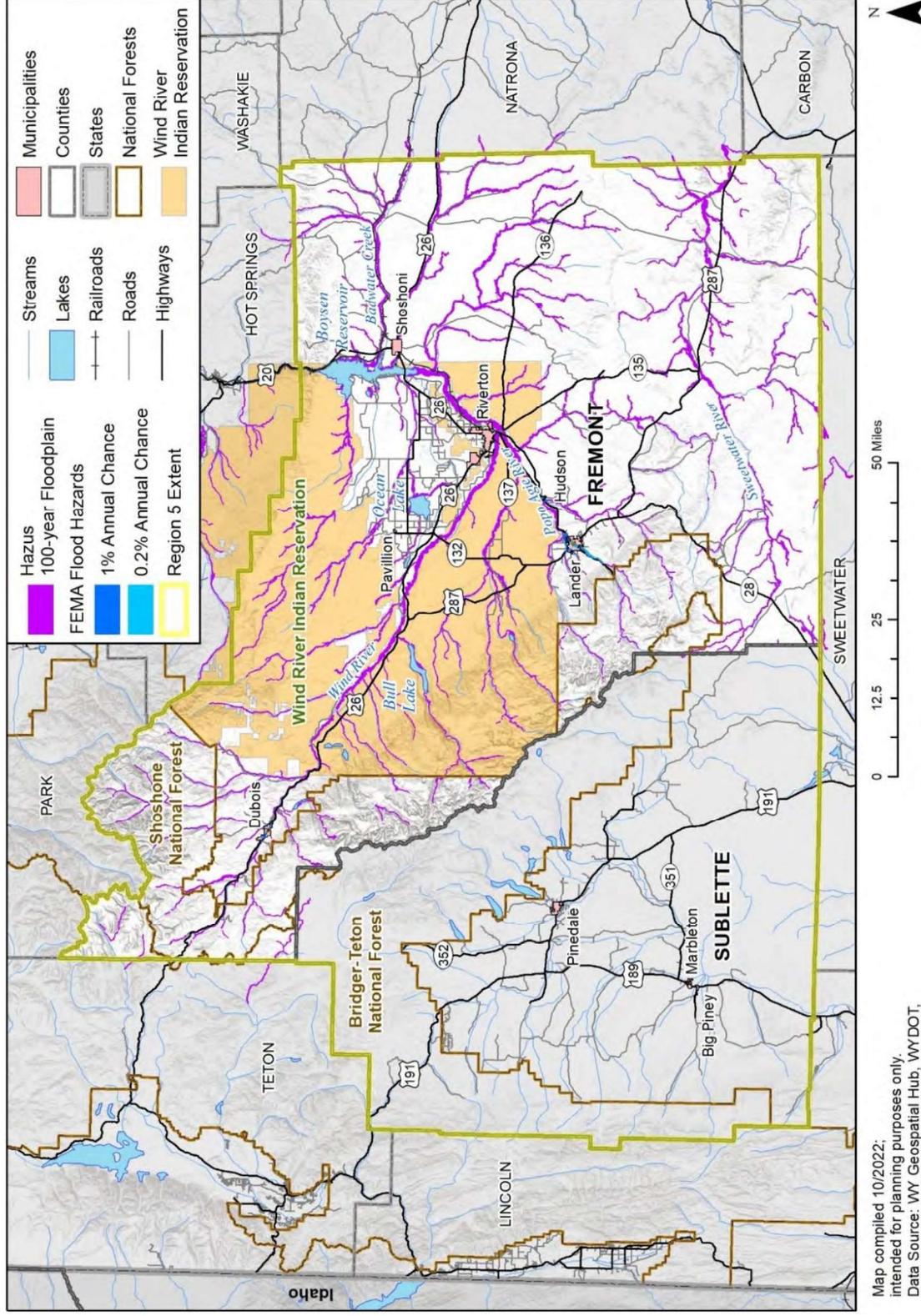
Based on data provided by the Fremont HMPC and historical records, extreme cold is an annual occurrence for the County. Though the probability of this event is highly likely, damages or lives lost occur less often. However, extreme cold can cause a problem for utility infrastructure and communications, as well as livestock and crops. Since 2012 Fremont County has received 3 USDA Disaster Designations for freeze or frost. Between 2007 and 2021 frost, freeze and cold winters have caused 3,579 acres of crops to be lost resulting in \$749,576 in indemnity payments countywide. Average annual losses due to extreme cold is estimated to be \$53,541. There is always a risk to people, however, danger is higher for the elderly, children, people in poor health, or individuals living without adequate shelter/heating. The overall significance of this hazard is low across the County and does not vary between the jurisdictions. Refer to Chapter 4 of the base plan for more information.

6.3.7 Flood

Fremont County has a long history of flooding that has resulted in the loss of life and significant property destruction. Most recently, the jurisdictions experienced spring flooding caused by anomalously warm temperatures and strong winds that brought rapid snowmelt around portions of the Lander Foothills and Wind River Basin. In addition, the frozen Little Popo Agie and Popo Agie rivers broke up rapidly and ice jams caused flooding in areas of the Lyons Valley. The result was \$15,920,00 in property damage and \$780,000 in crop damages between Hudson, Riverton, and Lander. However, in terms of damages, the most devastating event occurred in 2010, when overland flooding and high velocity water flows resulted in a Presidential Disaster Declaration DR-1923-WY. At the height of the event 32 square miles were affected in the flooded area. Structural damage during this event is estimated to be \$12 million reported by National Environmental Satellite, Data and Information Service (NESDIS). Approximately 150 farms were damaged with estimates being over \$2 million dollars (Fremont County Emergency Board, 2010).

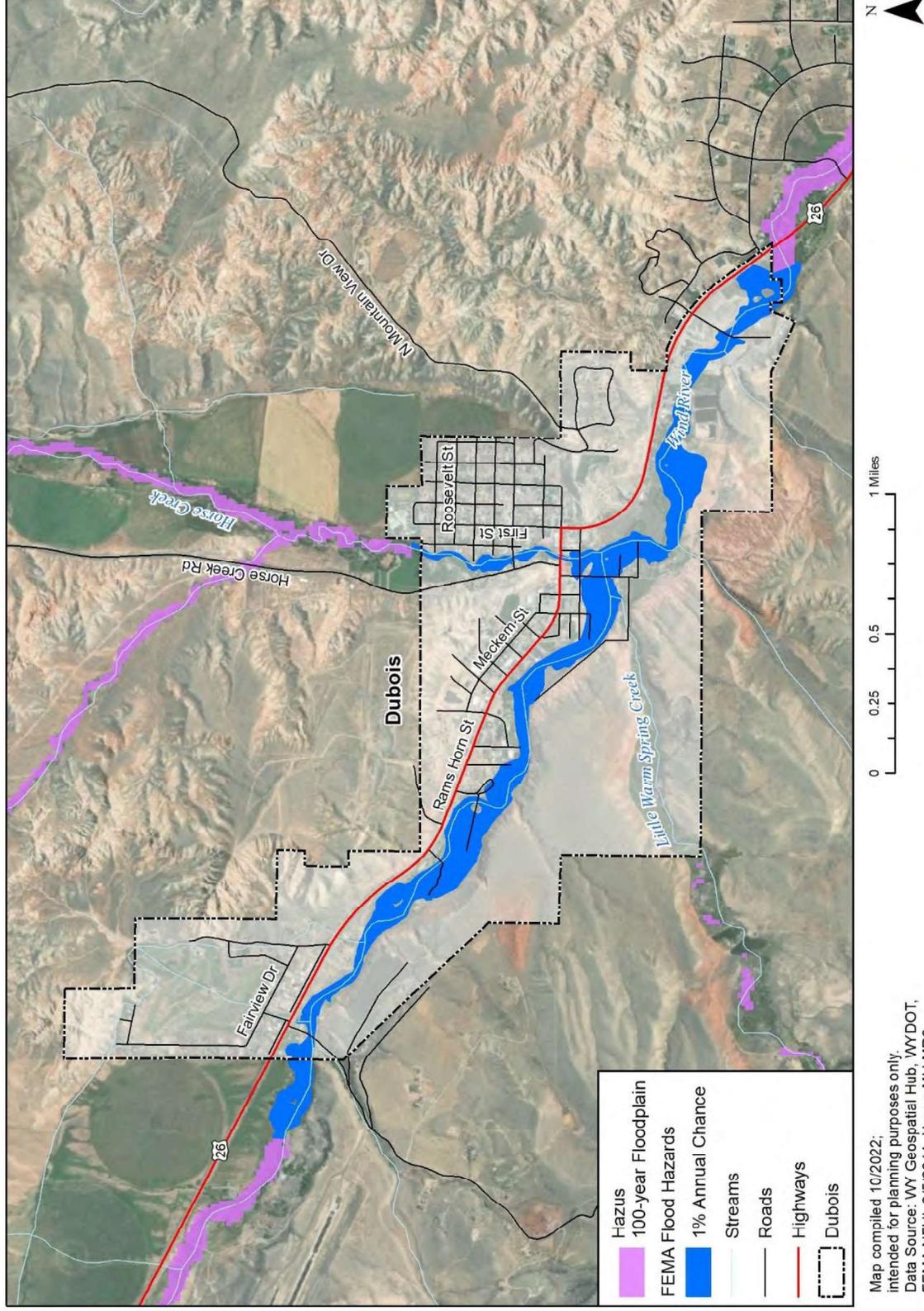
GIS analysis was used to estimate Region 5's potential property and economic losses during the 2022 update, see Section 4.2.5 in the base plan for specifics and results. In the event of a 100-year flood (1% annual chance), most impacted buildings are in the unincorporated areas (79.38%), followed by Dubois (8.46%), Hudson (7.38%), Lander (3.85%), and Riverton (0.92%).

Figure 4 Fremont County FEMA and Hazus Flood Hazards



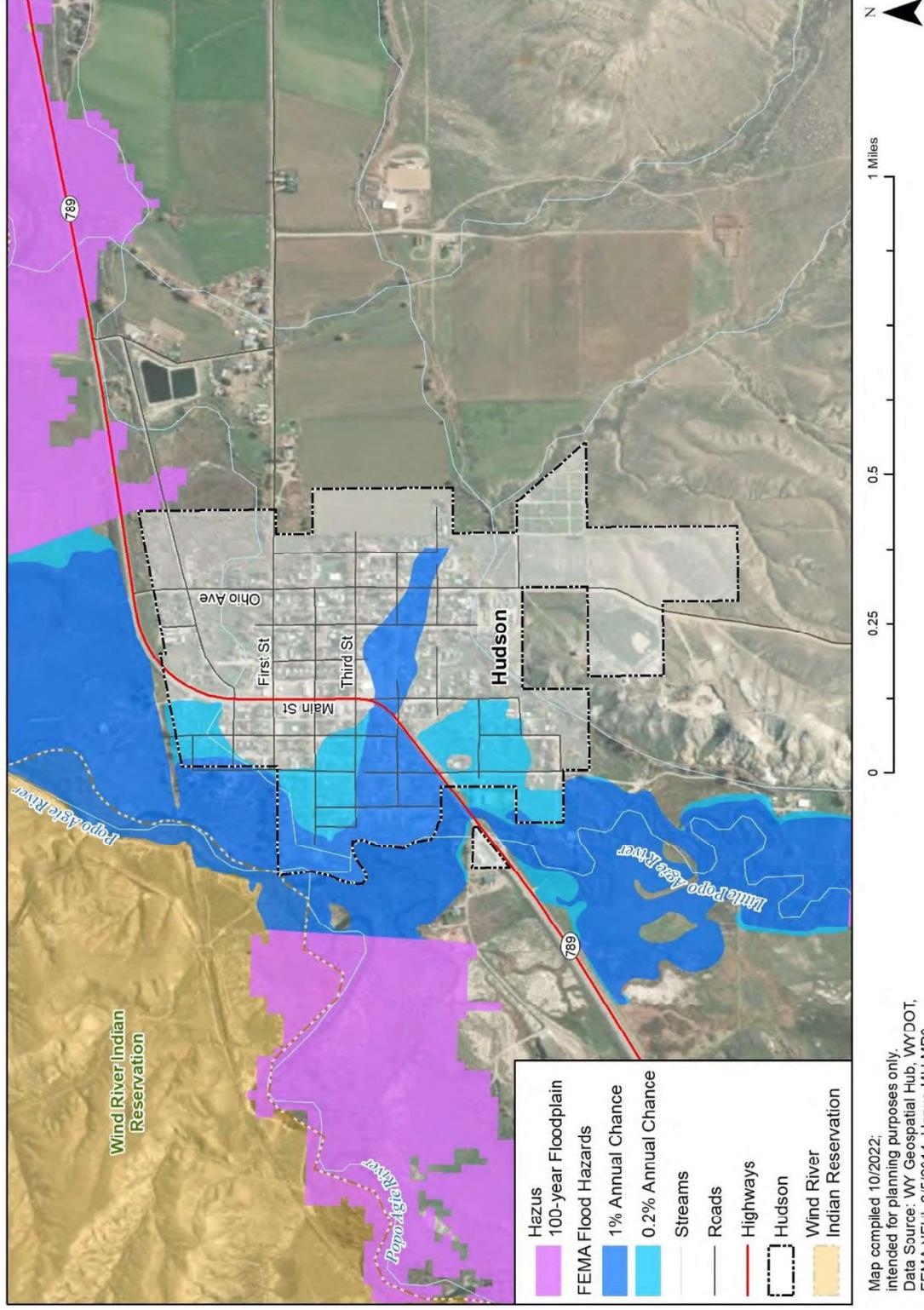
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
FEMA NFHL 2/5/2014, Hazus-MH MR2

Figure 5 Dubois FEMA and Hazus Flood Hazards



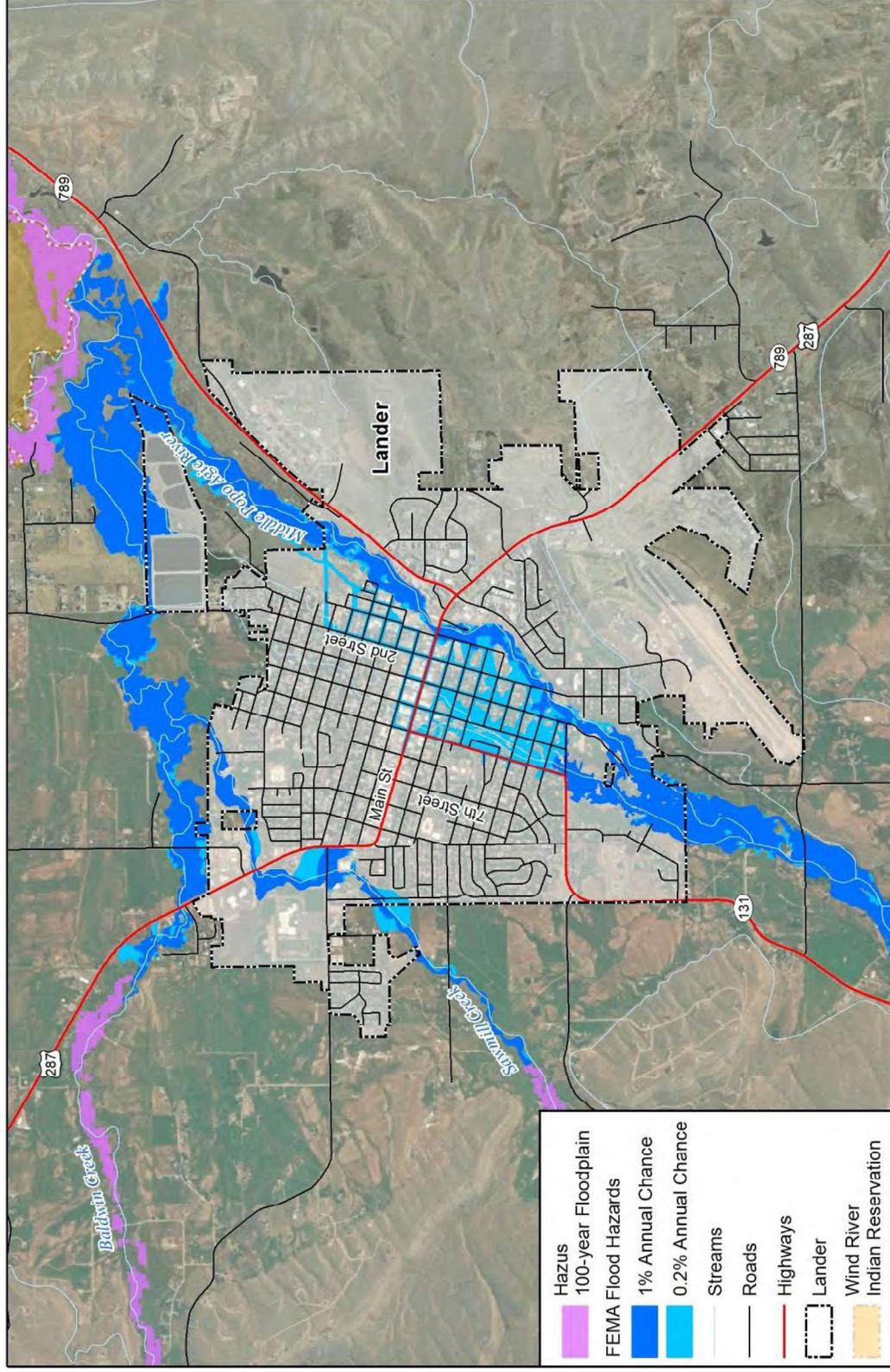
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WY/DOT,
FEMA NFHL 2/5/2014, Hazus-MH MR2

Figure 6 Hudson FEMA and Hazus Flood Hazards



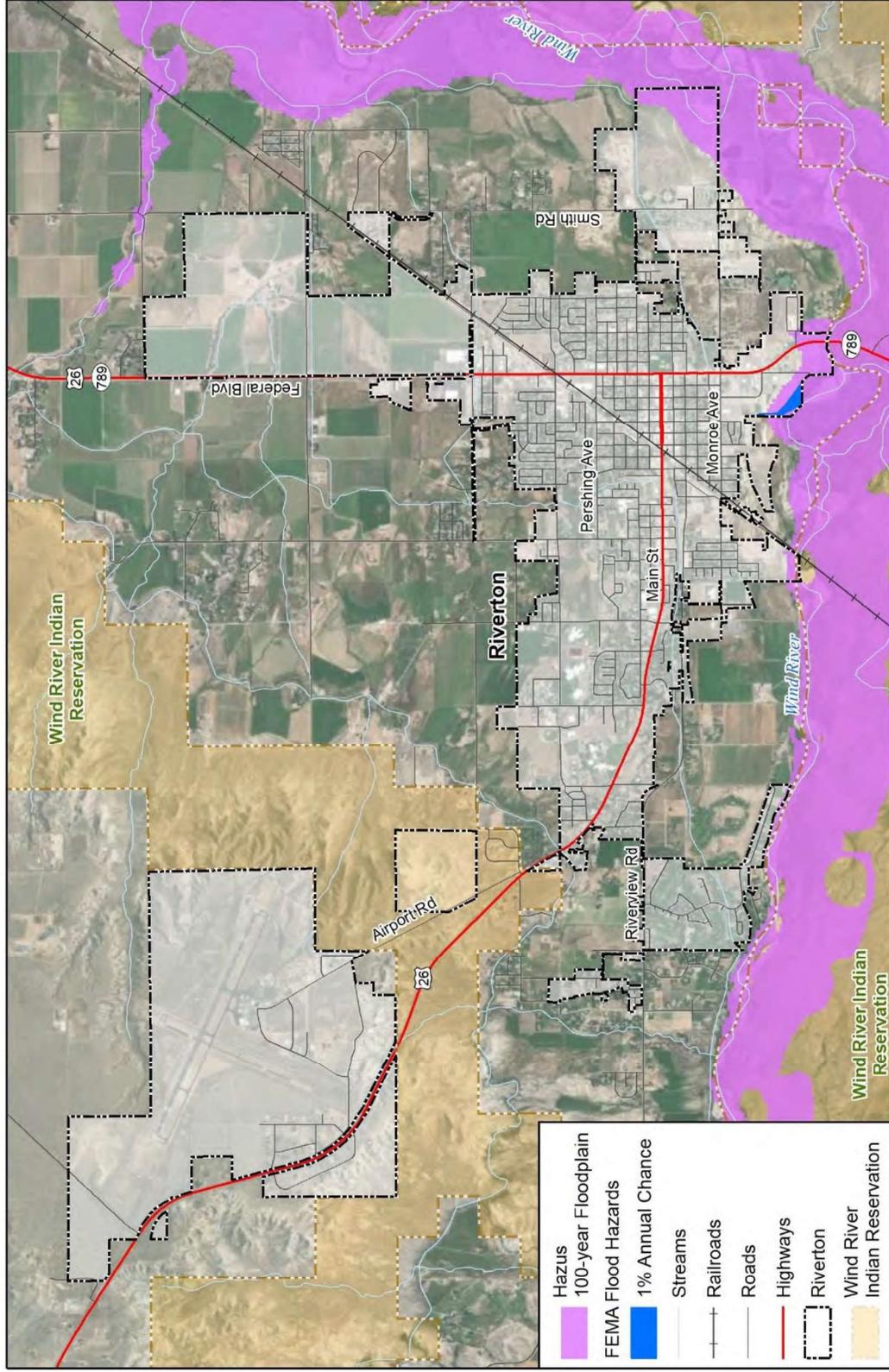
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WY/DOT,
FEMA NFHL 2/5/2014, Hazus-MH MR2

Figure 7 Lander FEMA and Hazus Flood Hazards



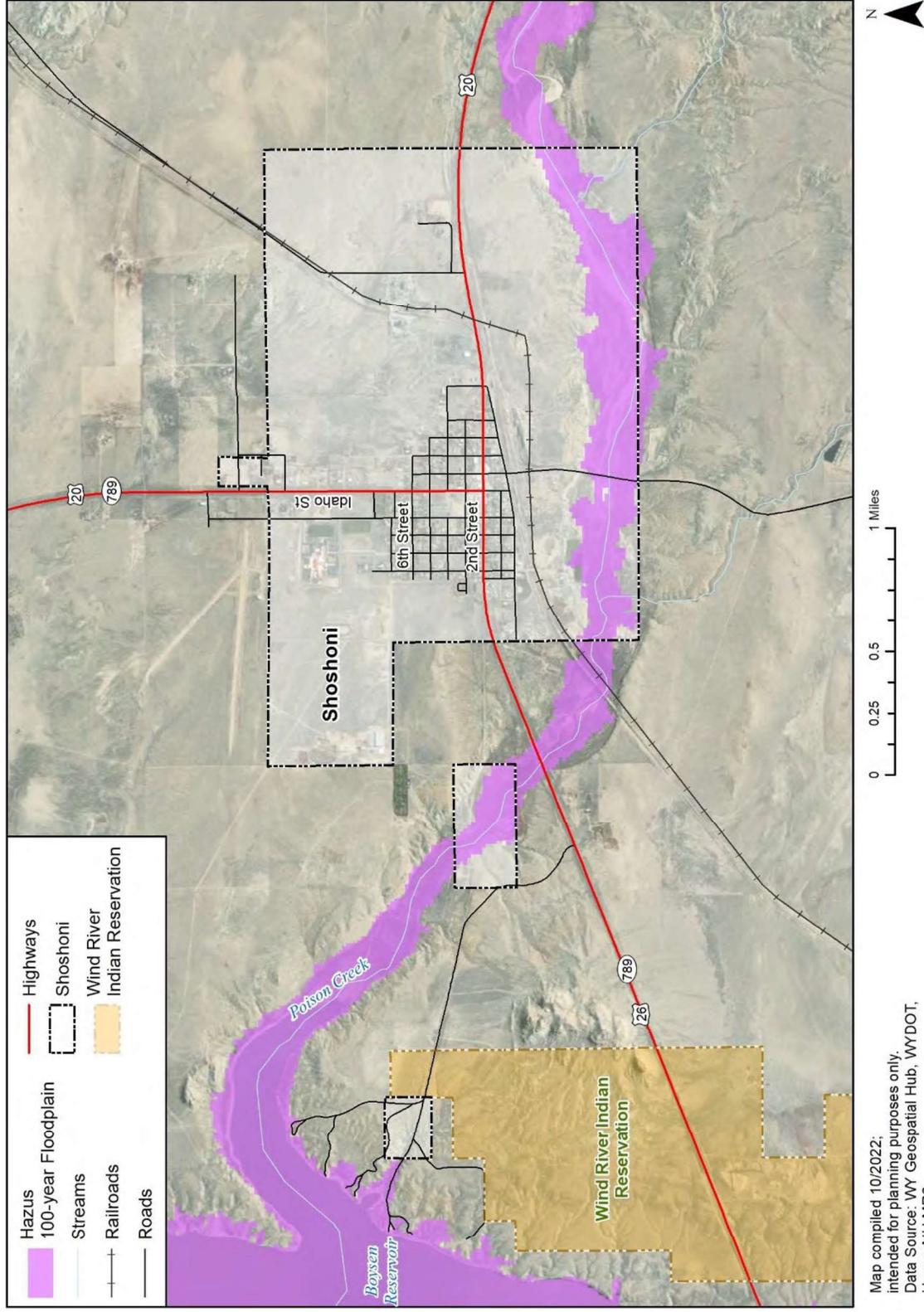
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
FEMA NFHL 2/5/2014, Hazus-MH MR2

Figure 8 Riverton FEMA and Hazus Flood Hazards



Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
FEMA NFHL 2/5/2014, Hazus-MH MR2

Figure 9 Shoshoni Hazus Flood Hazards



Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
Hazus-MH MR2

6.3.8 Hail

Hailstorms occur sporadically throughout Region 5, and primarily impact buildings and agriculture. Most of the damage associated with this hazard is related to crops, though there is potential for significant structural destruction from particularly large hailstones. Out of the 112 hail events reported in the planning area, 98 were in Fremont County. Additionally, all hail events with reported damage in the region was in Fremont County, which totaled \$25,500. The USDA reported crop damage due to hail in the planning area. All 35 events reported were in Fremont County, totaling 3,729 net acres lost and \$608,226 in damages. The Fremont County HMPC noted an event in 2015 which reportedly stripped an alfalfa field. Hail events in Fremont County have also caused roof damage in Lander and Riverton. Additionally, a hail event in August of 2019 produced ping-pong sized hail and caused damage to vehicles.

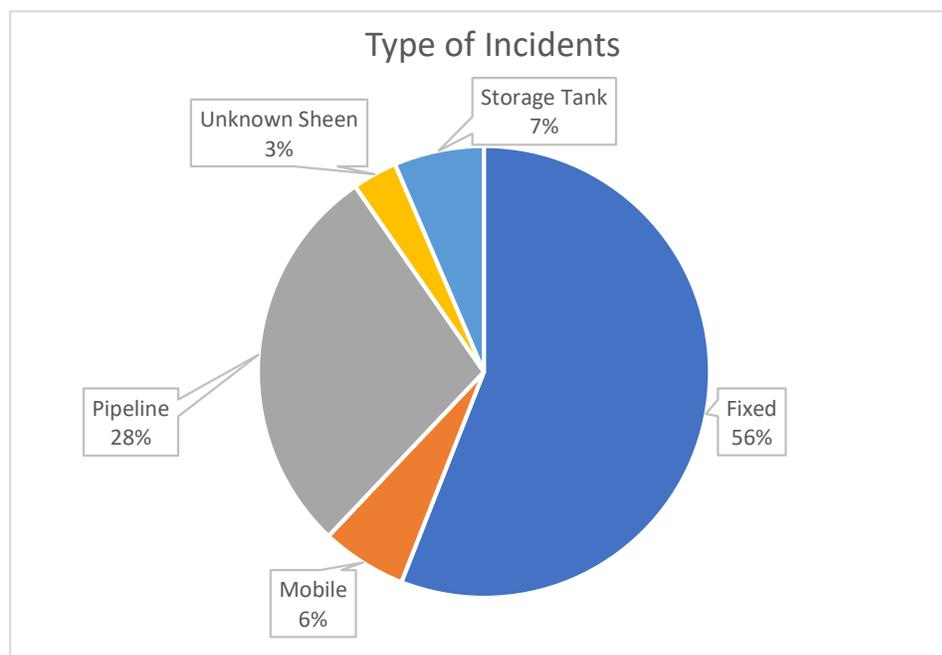
The probability of future occurrence for this event is likely, but the magnitude of these events is limited. Overall, hail poses a medium threat across the County and does not vary between the jurisdictions. Though it should be noted that property damage will be higher in the municipalities due to the concentration of built infrastructure, potential crop damage would be concentrated in the rural unincorporated areas. See Chapter 4 of the base plan for more information on the previously recorded hail events and associated damages.

6.3.9 Hazardous Materials

According to the National Response Center (NRC), Right-to-Know network database, there are five facilities in Fremont County required to generate a Risk Management Plan. There are also multiple oil and gas pipelines across the county.

According to the NRC database between 1990 and 2021, there have been 311 hazardous materials incidents in Fremont County. Fixed facilities were the most common incident type followed by pipeline incidents.

Figure 10 Hazardous Materials Incidents Reported to NRC by Type – Fremont County, 1990-2021



Source: NRC

In 2008, the LEPC reviewed and updated an emergency action plan that addresses hazardous materials and how they will be handled in Fremont County. This plan is adopted each year during the spring meeting. The Hazardous Materials plan is due to be updated beginning in 2023, this could take up to one year. To support response efforts, there is also a Regional Emergency Response Team composed of Fremont and Sublette Counties.

Refer to Chapter 4 of the base plan for a discussion of hazardous materials risk in the Region and County.

6.3.10 High Winds and Downbursts

Wind is a constant presence in Wyoming and the Fremont HMPC noted that high winds are a consistent issue for the County. It is difficult to assess vulnerability as it relates to location because damaging winds have occurred everywhere in the Region. The main risks associated with high wind events are related to poorly constructed buildings, flying debris, car accidents, and damage to electrical/power infrastructure. High wind events are often random and damages from high winds are often described in a regional context, though downbursts occur in smaller extents.

Wind damage reported in Fremont County totaled over \$1.3 million in property damages, with several of the most severe events occurring in Lander and Riverton. There are 450 days with reported severe wind events in Fremont County since 1964. The most damaging wind event in the planning area was recorded in Lander in Fremont County. The event took place in March of 1999, with estimated \$500,000 in damages to trees, automobiles, roofs, and other property. The max wind speed in the planning area was also recorded in Fremont County, with documented speeds reaching 126.6 mph. All \$114,105 of crop damage and 658.8 net acres lost from severe wind events in the planning area were recorded in Fremont County.

The probability of future occurrence for this event is likely, but the magnitude of these events is negligible. Overall, high winds pose a medium threat across the County and do not vary between the jurisdictions. See Chapter 4 of the base plan for more information on wind zones, events, and impacts.

6.3.11 Landslide/Debris Flow/Rockfall

The geologic history and unique conditions of Wyoming make landslides one of the most common hazards. In Fremont County, landslide deposits are highly concentrated in the northwestern portion of the County.

- The primary area of concern is along Highway US-26/287. Hwy 26 is the most direct route for accessing the Grand Teton National Park from central and southeastern Wyoming.
- In 2005, WYDOT identified a 21-mile segment along the roadway between Moran Junction and Dubois that needed major roadway improvements. Approximately 20 landslides were also observed within the outlined segment.

Numerous landslides are present in Fremont County. Specifically, landslides are present on the following quadrangles:

- Antelope Ridge
- Bain Draw
- Blue Gulch
- Blue Holes
- Boysen
- Bull Lake West
- Burris
- Castle Rock
- Cottonwood Pass
- Crater Lake
- Crooks Mountain
- Crooks Peak
- Dishpan Butte
- Dubois
- East Fork Basin
- Esmond Park
- Fish Creek
- Fish Lake
- Fossil Hill
- Gas Hills
- Gravel Spring
- Indian Point
- Kirkland Park
- Kisinger Lakes
- Lander
- Lava Mountain
- Mason Draw

- Maverick Springs
- Mexican Pass
- Miners Delight
- Moccasin Lake
- Mount Arter
- Ramshorn Peak
- Sand Draw
- Snow Lake
- Split Rock NW
- Torrey Lake
- Warm Spring Mountain
- Whiskey Peak
- Wiggins Peak
- Wilderness
- Yellowstone Ranch

In terms of significance, landslides, debris flow, and rockfall vary based on the magnitude and the location. There is also a possibility that creeks or rivers within the County could become dammed by landslide activity, resulting in a flash flood hazard downstream if the landslide dam fails or is overtopped, or flood nearby developed areas as pooling behind the landslide dam occurs. While some events are, small and have limited impact on people and infrastructure, other occurrences can involve large sections of earth and may obstruct major roadways, power line corridors, or gas lines.

During the 2022 development of this regional plan a GIS analysis of exposure to landslide hazard areas was performed, with the results detailed in Chapter 4 of the base plan. Fremont County has a very high degree of landslide vulnerability, with 591 parcels or 17% of total parcels in the County located in the highest landslide susceptibility areas. Most of these vulnerable parcels are located in unincorporated areas of Fremont County. The geospatial distribution of landslide susceptibility can be seen on Figure 11 through Figure 16 .

Figure 11 Fremont County Landslide Hazard Areas

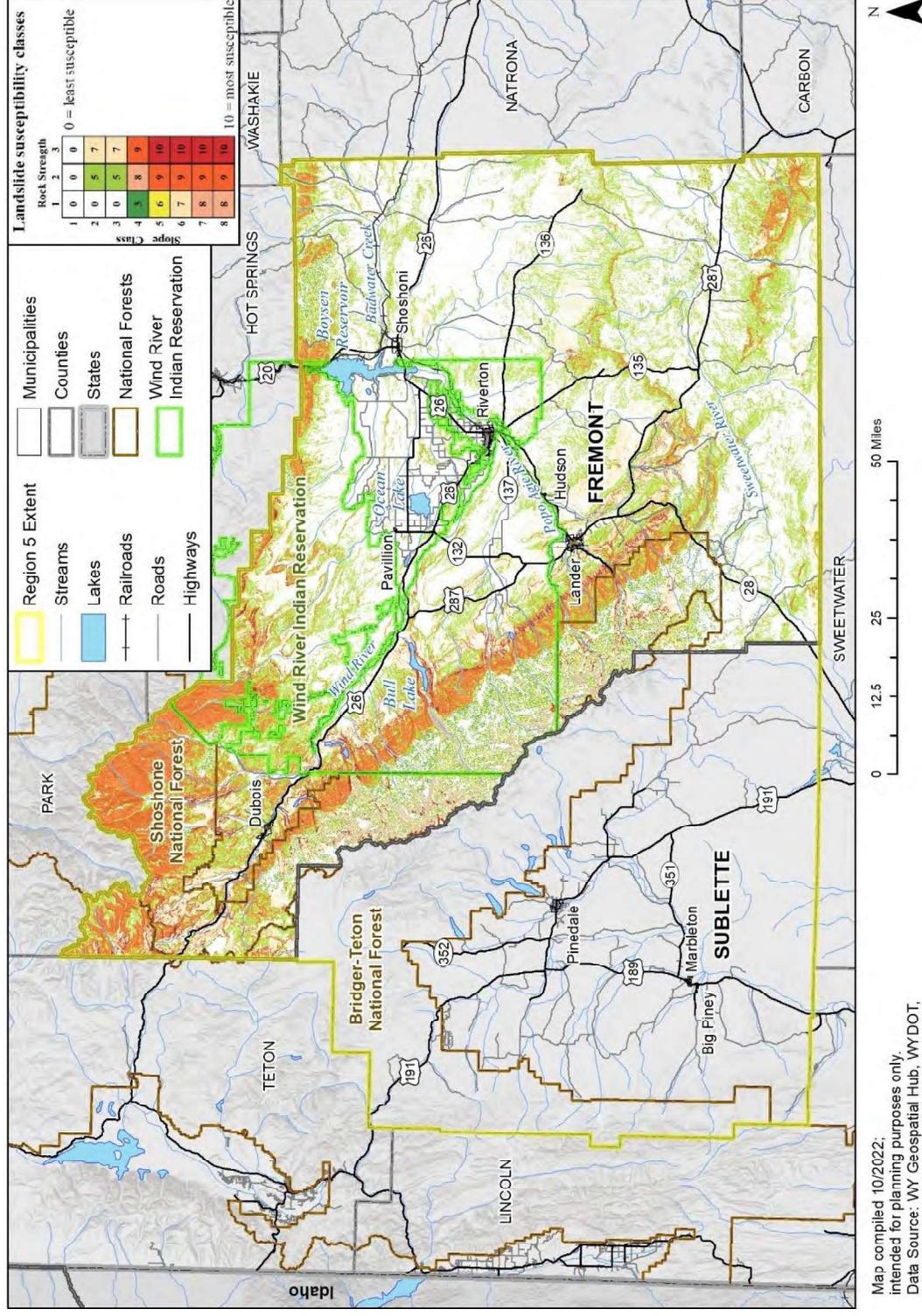


Figure 12 Town of Dubois Landslide Hazard Areas

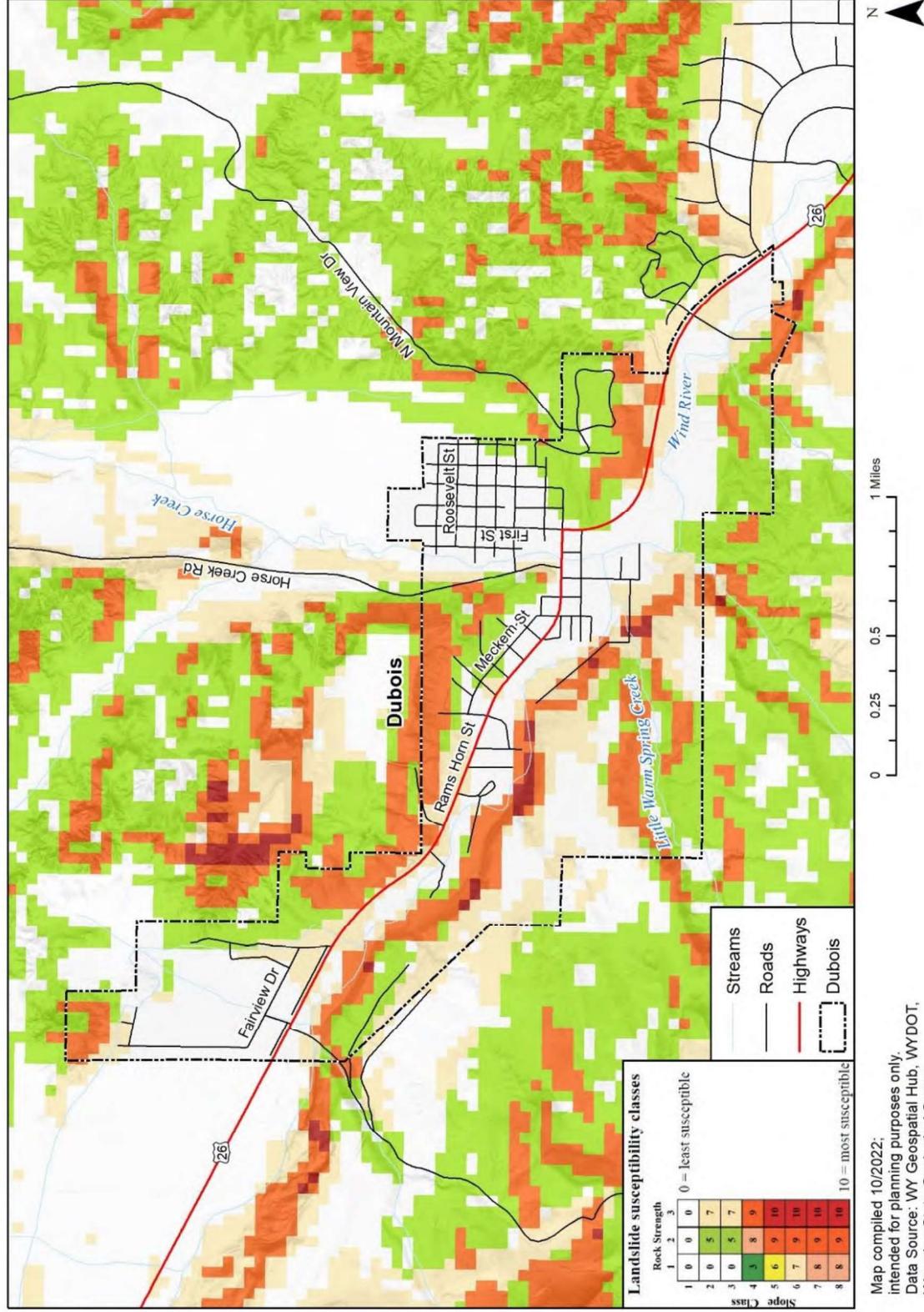


Figure 13 Town of Hudson Landslide Hazard Areas

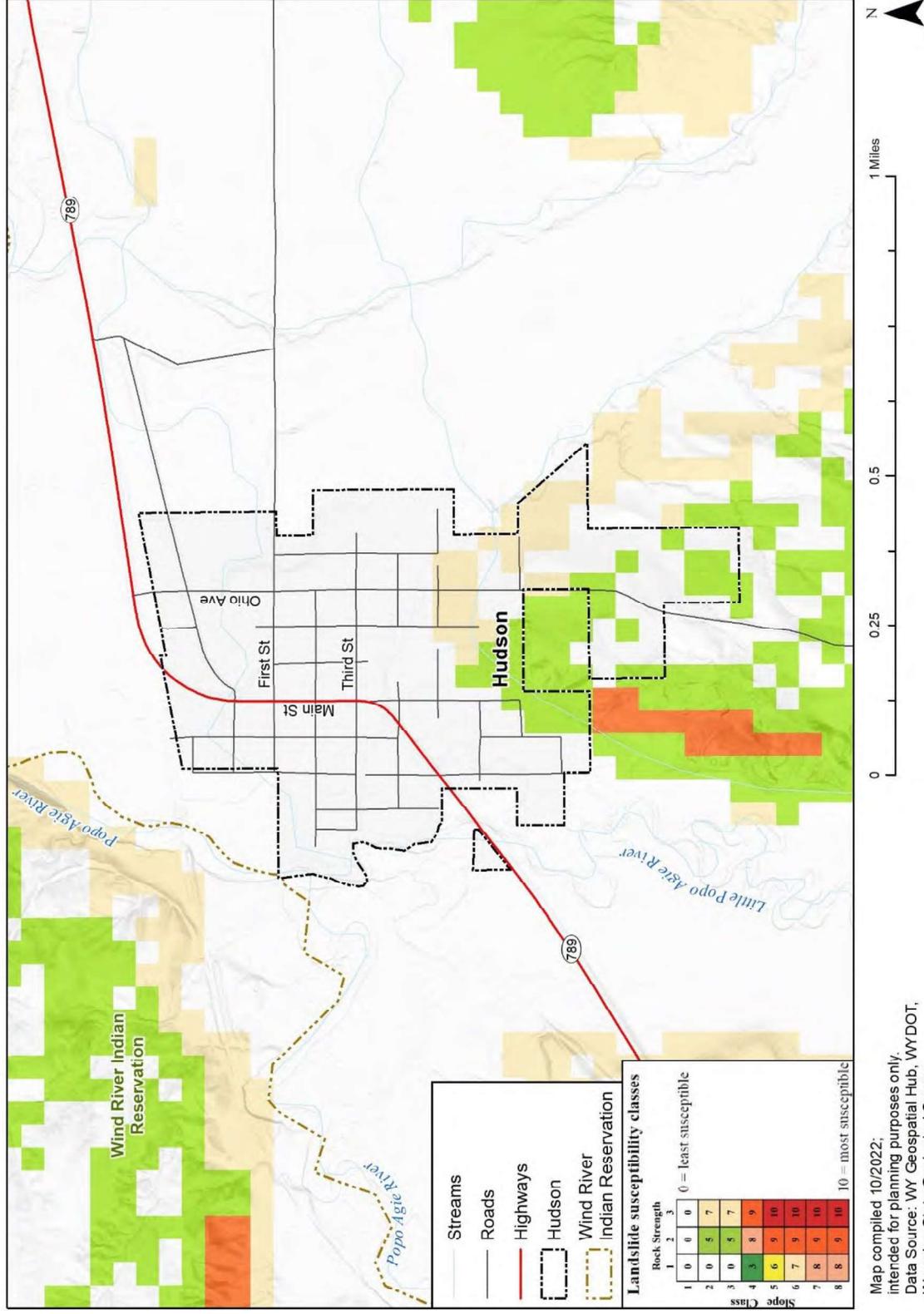


Figure 14 Town of Lander Landslide Hazard Areas

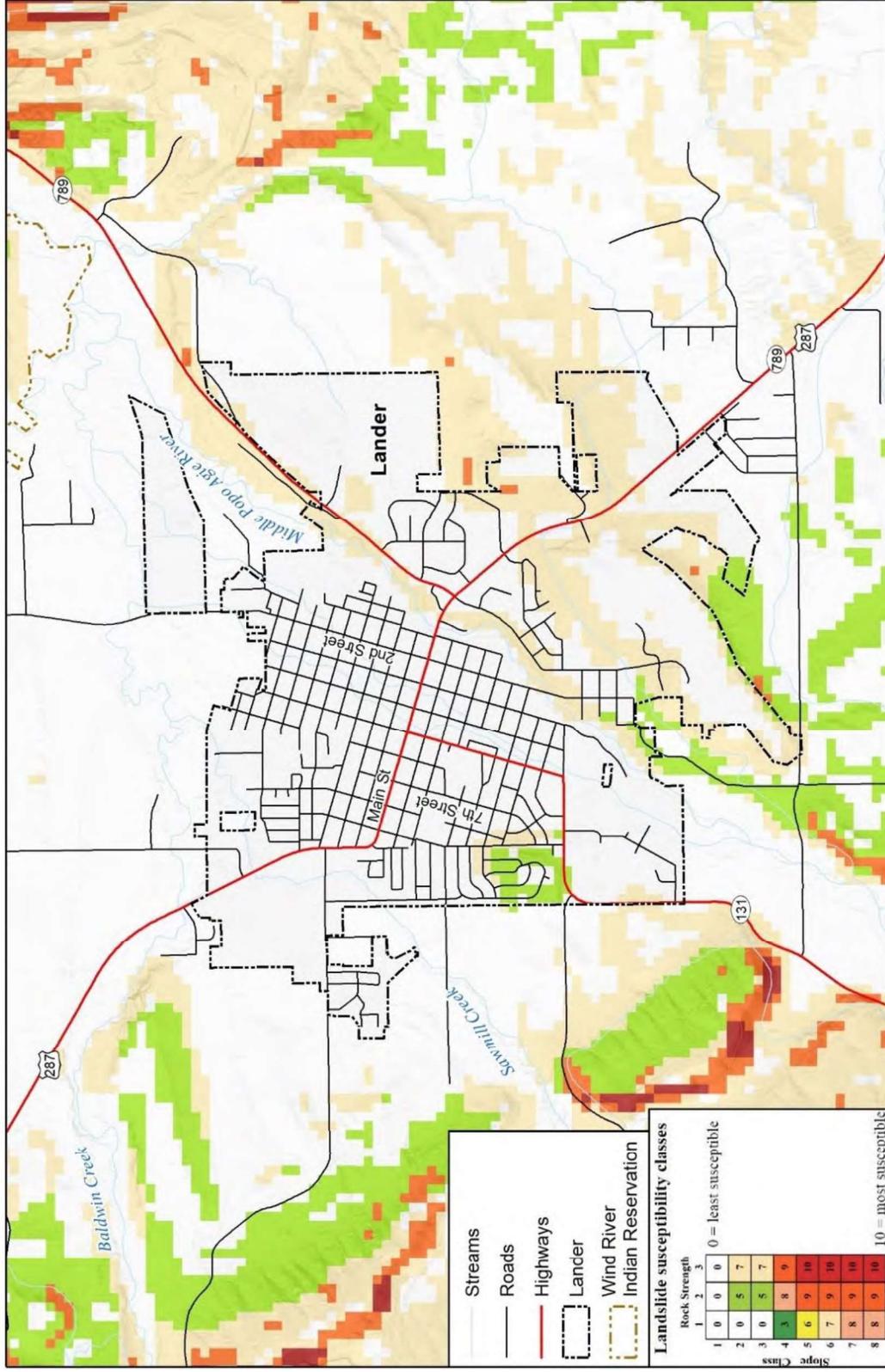


Figure 15 City of Riverton Landslide Hazard Areas

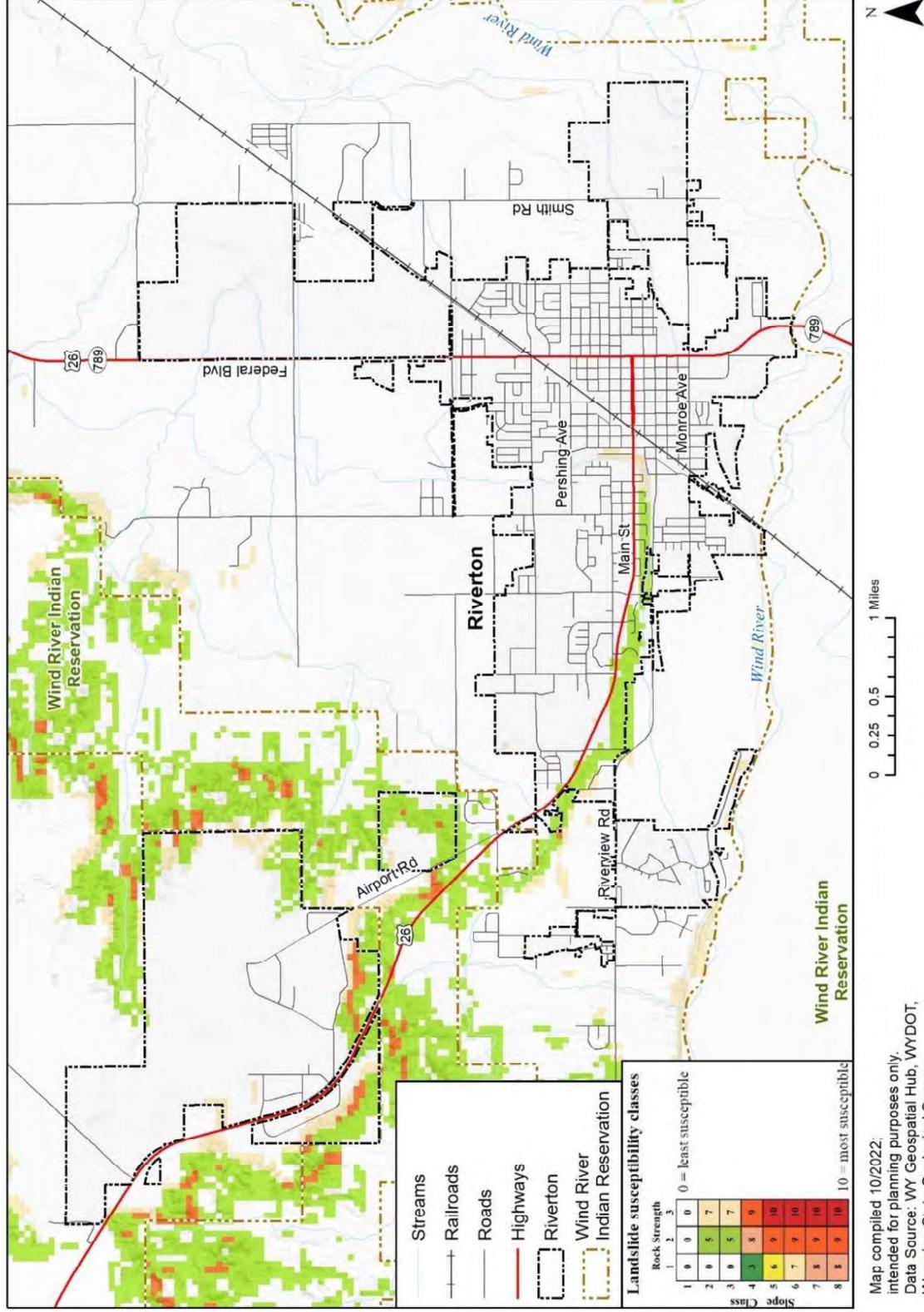
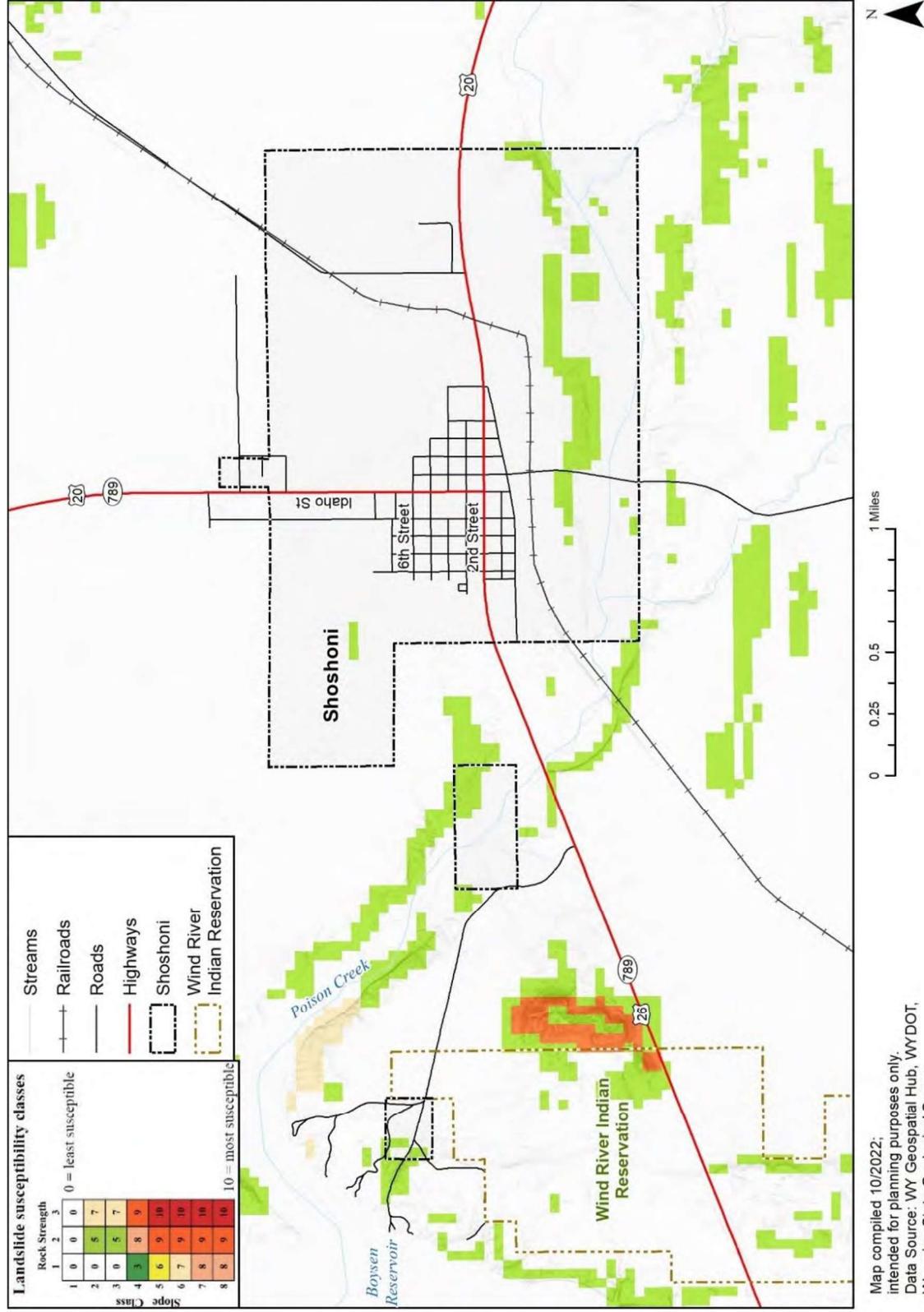


Figure 16 Town of Shoshoni Landslide Hazard Area



Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
Wyoming State Geological Survey

Future impacts are likely to affect transportation corridors, rivers, lakes and reservoirs, transmission lines, campgrounds, and the occasional structure in the County. Historically, there has been damage associated with landslides in Lander, the Wind River Canyon, Dubois, the Beaver Rim Area, and the South Pass area.

6.3.12 Lightning

All areas in western Wyoming are susceptible to lightning strikes. Impacts to persons and property are likely to remain isolated. Outdoor workers and outdoor enthusiasts and livestock will remain susceptible to lightning strikes. The Fremont HMPC explained an event in Lander, where a substation was hit in 2016 and resulted in power outages for a few hours. Strikes have resulted in cattle deaths, sometimes 6-10 from one single strike.

Of the eight reported lightning events in the planning area since 1969, four occurred in Fremont County. Three of the four events that occurred in Fremont County caused monetary losses due to the lightning event. One of these damaging events occurred on June 13th, 2011, when lightning struck a home and sparked a fire. There were no fatalities or injuries, however, the entire home was destroyed and cost \$200,000 in damages.

Compared to the eastern portion of the State, Region 5 and the associated planning areas are three times less likely to experience cloud to ground lightning strikes. The most salient impacts associated with lightning events are the effects of loss of power or wildfire. The Fremont County HMPC noted that lightning events can be major issues for the power system with many surge arrestors on power lines. Structural fire and injuries/fatalities are less likely. The probability of future occurrences is highly likely across the County, but severity is limited. Overall, lightning poses a high threat across the County and does not vary between jurisdictions. See Chapter 4 of the base plan for more information on lightning events and impacts.

6.3.13 Mine Subsidence

There are numerous abandoned mine sites with subsidence-prone underground workings in Fremont County, especially in the southwestern and northeastern areas. Mines in the Region have been identified and there are mitigation projects designed to reduce the impacts from underground mining and subsidence, and to remove the threat they pose to the surrounding area. The unmitigated identified mines pose little to no threat to infrastructure in the surrounding area. Mine subsidence events occur occasionally, and the degree of risk and impact varies based on the characteristics of each mine. Refer to Chapter 4 of the base plan for a more detailed vulnerability assessment and location of abandoned mine sites. There are some areas near Hudson, but most are in the rural unincorporated areas.

6.3.14 Severe Winter Weather

Winter storms are a yearly feature of the Wyoming climate and may occur anywhere in the State. Blizzard conditions bring the triple threat of heavy snowfall, strong winds and low temperatures. Poor visibility and huge snowdrifts are major hazards caused by blowing snow. These storms disrupt work, make travel difficult or impossible, isolate communities, kill livestock by the hundreds or thousands and sometimes leave human fatalities in their wake. In the Lander Valley and the foothills of the Wind River Mountains there is a condition which occurs referred to as an 'upslope' condition. Wind blows from the east to west against the foothills causing the moisture to rise the eastern slope of the mountain. This event can cause heavy snowfall in the Lander and Dubois areas and unincorporated areas in the foothills.

- According to the Fremont County 2012 Hazard Mitigation Plan, the largest snowstorm recorded since 1891 was on April 21-24, 1999, when Lander received 52.7 inches of snow during one event.
- The Fremont County HMPC noted an upslope event in April 1999 which reached 52' of snow in Lander which caused some roofs to collapse.

The overall significance of this hazard is high across the County and does not vary between the jurisdictions or the Region as a whole. Refer to Chapter 4 of the base plan for more information.

6.3.15 Tornado

Of the 26 tornado events reported by the NECI, 20 occurred in Fremont County. Many documented tornadoes occurring in the counties in Region 5 are given low ratings on the Fujita Scale (F0s and F1s) simply because these tornadoes are often formed over open land and result in little or no damage. However, there have been 3 recorded F2 tornado events in Fremont County, as well as one F3 event. Fremont County has significantly more recorded tornado events compared to Sublette County, but the overall significance is still very low. Since 1950, there have been 20 recorded tornadoes in Fremont County, and of these events, there were four fatalities, no injuries, and no crop damages. Most property damages were accrued from two individual events in 1980 and 1986, where \$250,000 worth of damages were recorded, however, most events were associated with fewer damages (\$2,500-\$25,000 range). Overall, Fremont County accounted for \$627,530 (or 96%) of total damages in the planning area.

All property is vulnerable during tornado events, but properties in poor condition or in particularly vulnerable locations may risk the most damage. Mobile homes are more vulnerable to the impacts of a tornado event compared to other housing types due to methods of construction. Statewide, mobile homes represent about 13% of total housing compared to 6.1% Nationwide. Fremont County has a higher percentage of mobile homes as total housing compared to the statewide and national averages, with 15.9% of occupied housing units as mobile homes or other housing types.

Region 5 tornado events are very small in terms of magnitude, with limited associated impacts, and the low-level significance of this event does not vary across jurisdictions. See Chapter 4 of the base plan for more information on tornado events and impacts.

6.3.16 Wildfire

Fremont County has a long history of wildfire, as a significant portion of the county lies within national forest and the Wind River Range. The Federal Wildland Occurrence data records 914 total fire events with 553,846 total acres burned in Fremont County from 1980 to 2021. The largest fire in Fremont County occurred in 2002. The South Fork Fire burned 150,000 acres. The table below describes Fremont County wildfires that burned 1,000 or more acres between 1980 and 2021, sorted by size.

Table 22 Wildfires over 1,000 acres in Fremont County: 1980-2021

Name	Year	Acres Burned
South Fork	2002	150,000
Katesbasin	2000	137,069
Alpine Lake	2012	45,877
Alpine Lake	2012	45,877
Norton Point	2011	24,237
Norton Point	2011	24,237
Wise Flat	1988	22,000
Lava Mountain	2016	14,654
Pass Creek	2002	13,433
Bear Cub	2012	6,493
Nowlin	2011	4,425
Ann's	1989	3,477
Dinwoody	2001	2,432
Beaver Rim	2001	1,927

Name	Year	Acres Burned
Unit 40	1988	1,804
Burroughs	2013	1,782
Spring Mtn	2000	1,755
Fairfield	2013	1,545
Murphy Draw	2000	1,365
17 Mile #6	1994	1,344
Fairfield	2013	1,335
Red Canyon	2000	1,312
Washakie Park	2006	1,240
Stratton	1992	1,216
Little Bob Lake	2015	1,199
Cedar Butte Rx	2006	1,130
Wise Flat	2006	1,044

Source: Federal Wildland Occurrence Data

There have been no catastrophic urban fires documented in Fremont County although large wildland fires become increasingly damaging as the population expands into the more rural areas. The statewide Wildland Urban Interface Hazard Assessment and its resultant outputs serve two primary purposes: assisting in prioritizing and planning mitigation projects and creating a communications tool to which agencies can relate to common information and data. With the mapping analysis evaluating areas of varying wildfire vulnerability, the final output will result in a Risk, Hazard, and Value (RHV) map displaying areas of concern (Redzones) for catastrophic wildland fires.

Another method of estimating potential future impact is to determine the value of structures that are located within Wildfire Risk Areas, or wildland fire building exposure values. Wildland fire building exposure value is the value of buildings that can be potentially damaged by wildland fire in an area. Building exposure values are based on county assessor data. The methodology utilized is like that used to model flood exposure described in the flood chapter. Based on GIS analysis performed, Fremont County has almost \$1.5 billion in improved property value potentially at risk to wildland fires, and there are an estimated 19,731 people living in the wildfire risk areas. Though it is not likely that the areas at risk will simultaneously face a completely destructive event, this figure provides the upper end of what could be affected. Future wildfires could damage crops and watersheds within the County and contribute to soil erosion and deposition problems.

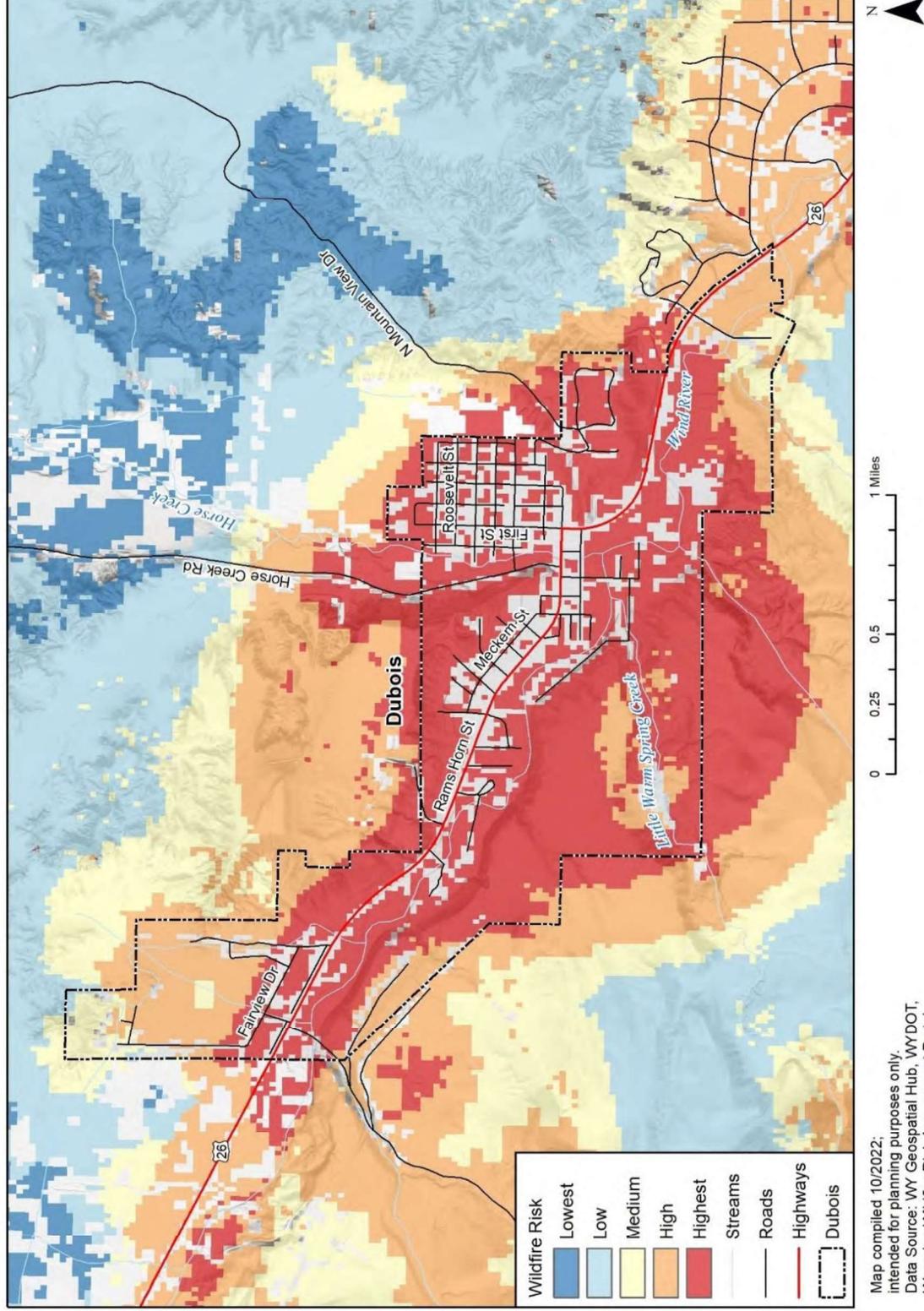
The principal wildfire mitigation plan for Fremont County is the "Fremont County Community Wildfire Protection Plan" (Updated 2019). The CWPP identified thirty-four communities at risk, broken out along geographic areas. A community assessment was conducted during the CWPP development using a Fire Hazard Severity Scorecard based on the International Wildland-Urban Interface Code, combined with processes referenced in the Firewise Communities Publication Hazard Assessment Methodologies. Each community was given a high, moderate or low wildfire hazard rating, based on a number of factors including physical infrastructure, roads, fire behavior components such as fuels and topography, water supplies, available fire protection and local fire occurrences. The communities identified are listed below, grouped by their hazard severity rating. See the CWPP for additional descriptions of these communities and mitigation recommendations.

- **Low** – Jeffrey City, Lysite/Lost Cabin, Red Rocks, Shoshoni/Bonneville, South Pass City, Sweetwater Station, Arapahoe, Riverton, 17 Mile, Pavillion/Missouri Valley/North Portal/Hidden Valley
- **Moderate** – St. Stephens, Fort Washakie, Boulder Flats, Crowheart, Ethete, Lander, Johnstown/River Bottom, Atlantic City, Jakey's Fork, Warm Springs, Dubois

- **High** – Beaver Creek Area, Pine Creek, Homestead Park/Lander Mountain Road, Red Canyon, Pass Creek/Limestone, Warm Springs Mountain, Porcupine, Stoney Point, Upper Wind River, Dunoir, Crooked Creek, Warm Springs ULWS, Sinks Canyon

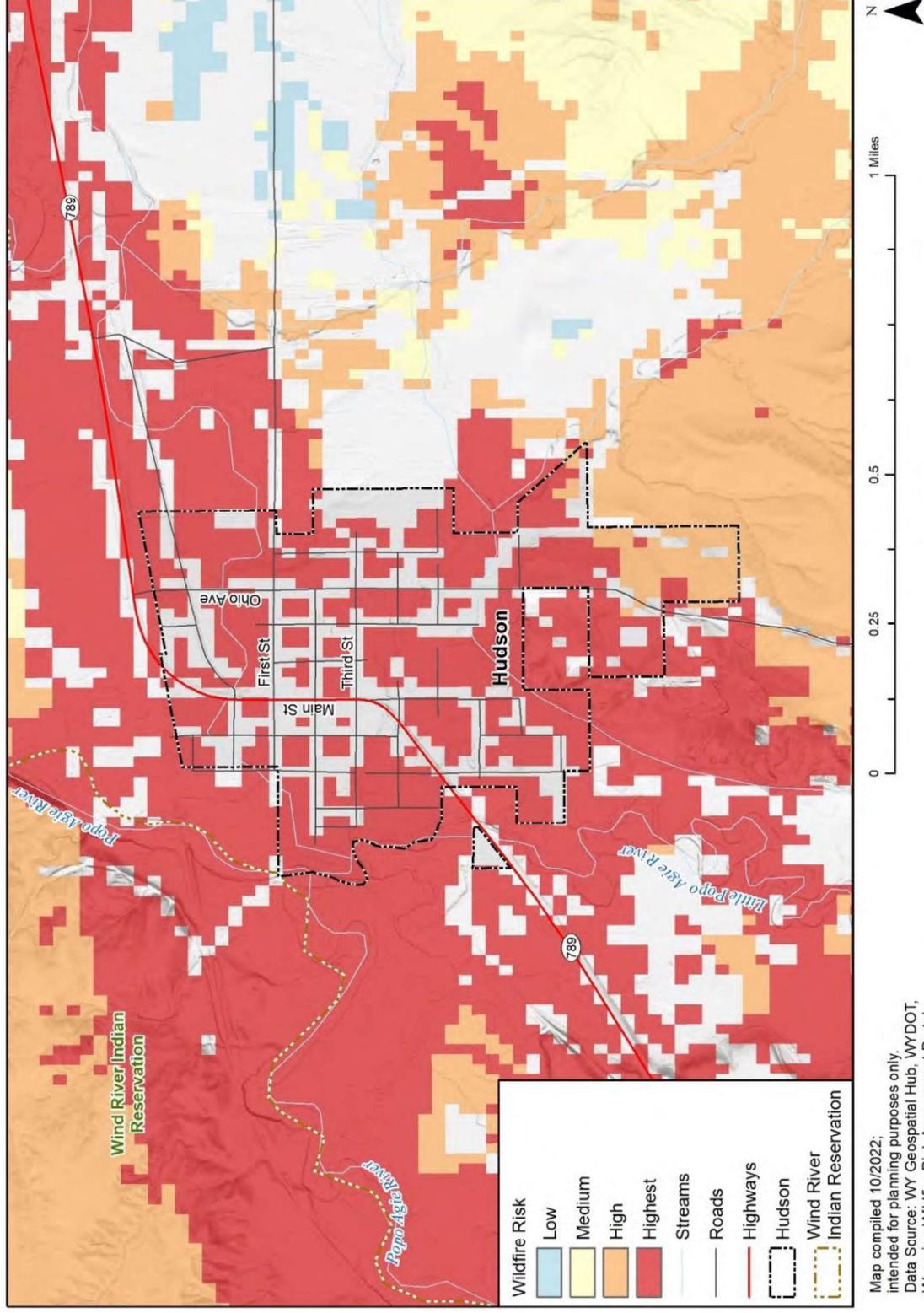
Figure 17 through Figure 21 below illustrate the wildfire risk to each of the incorporated communities in Fremont County in greater detail.

Figure 17 Dubois Wildfire Risk



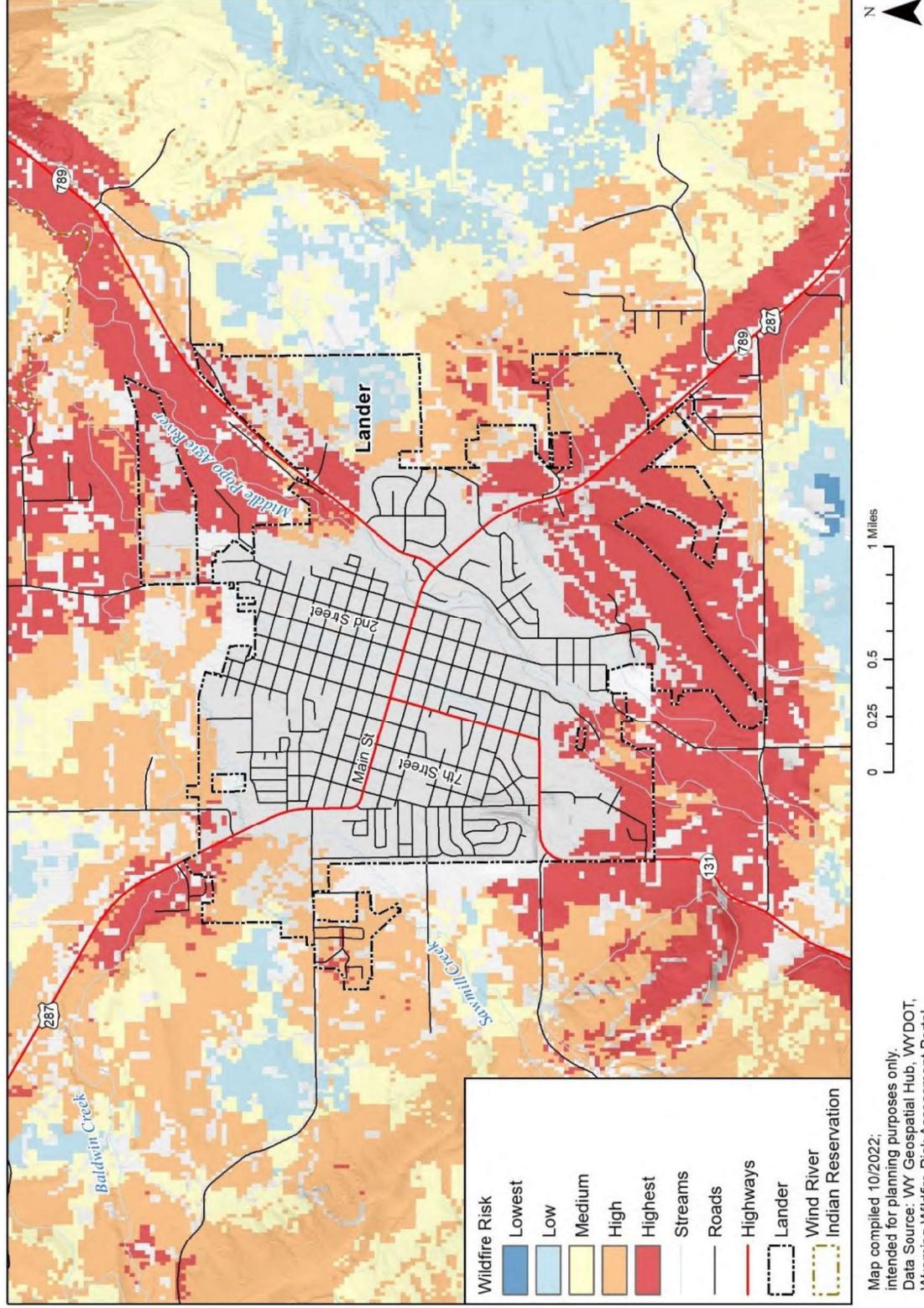
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
Wyoming Wildfire Risk Assessment Portal,
Wyoming State Forestry Division

Figure 18 Hudson Wildfire Risk



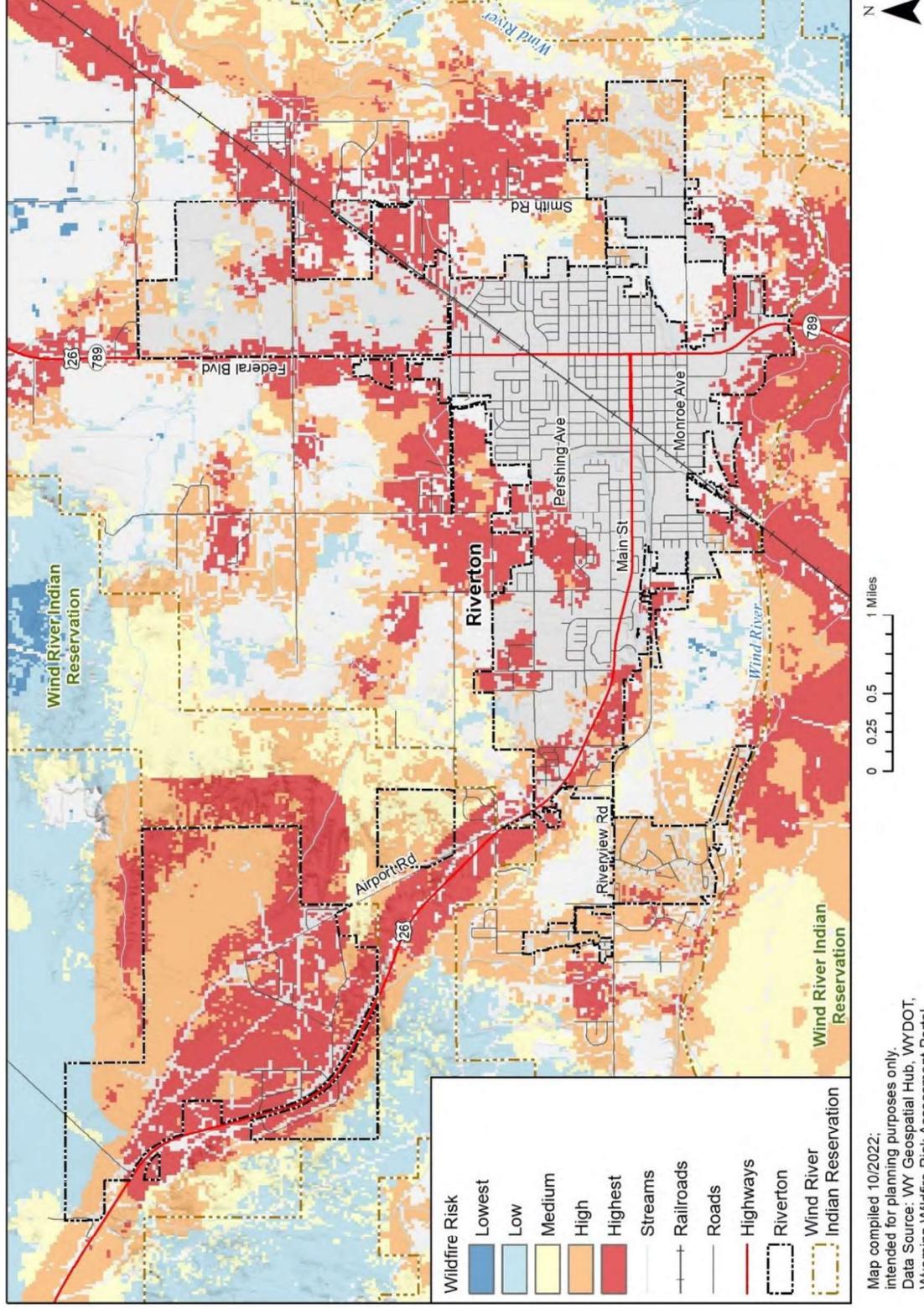
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
Wyoming Wildfire Risk Assessment Portal,
Wyoming State Forestry Division

Figure 19 Lander Wildfire Risk



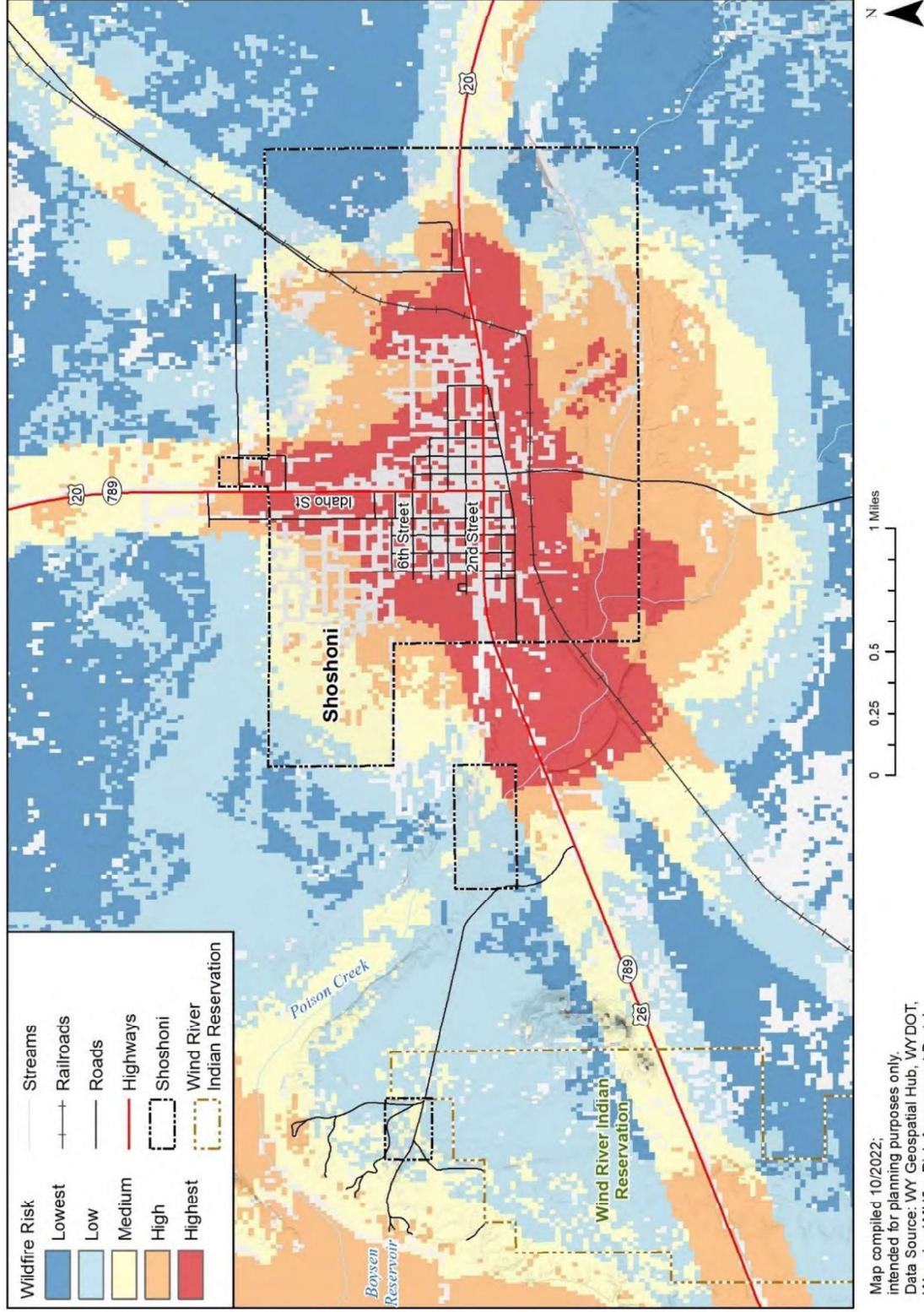
Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
Wyoming Wildfire Risk Assessment Portal,
Wyoming State Forestry Division

Figure 20 Riverton Wildfire Risk



Map compiled 10/2022;
intended for planning purposes only.
Data Source: WY Geospatial Hub, WYDOT,
Wyoming Wildfire Risk Assessment Portal,
Wyoming State Forestry Division

Figure 21 Shoshoni Wildfire Risk



7 Mitigation Capabilities Assessment

As part of the regional plan update 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 purpose of this effort was to identify policies and programs that were either in place or could be undertaken, if appropriate. Second, the HMPC conducted an inventory and review of existing policies, regulations, plans, projects, and programs to determine if they contribute to reducing hazard related losses.

Most communities, including Fremont County, have developed and implemented emergency preparedness plans for a variety of contingencies. Emergency preparedness plans are primarily reactive and focus on the community’s readiness to respond to natural and man-made disasters if and when they occur. Fremont County has implemented several emergency preparedness measures, such as stockpiling sandbags for future flood events, development of regional emergency response teams, and education and training for first responders. These measures can also be thought of as hazard mitigation measures because they are designed to limit the adverse effects of emergencies when they occur.

7.1.1 Regulatory Mitigation Capabilities

Table 23 lists planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in Fremont County and each participating jurisdiction. Excerpts from applicable policies, regulations, plans and programs descriptions follow to provide more detail on existing mitigation capabilities.

Details on NFIP participation and flood map status are provided in Table 24 below.

Table 23 Fremont County NFIP Participation by Jurisdiction

Community	Date of Entry into Program	Current Effective Map Date
Fremont County	07/08/75	02/05/14
Lander	09/01/78	09/16/11
Dubois	09/16/11	09/16/11
Riverton	09/01/99	09/16/11
Shoshoni	05/28/86	NSFHA*
Hudson	07/17/78	09/16/11
Pavillion	N/A	Not mapped

*No Special Flood Hazard Areas (SFHA) Currently Identified

Table 24 Summary of Fremont County Mitigation Capabilities

Planning & Regulatory Tools (ordinances, codes, plans)	County	Dubois	Hudson	Lander	Pavillion	Riverton	Shoshoni	Changes since 2017?
Comprehensive, Master, or General Plan	Yes Minimal Land Use Plan	No	No	Yes 2012 Master Plan	No	No	No	n/a
Capital Improvement Program or Plan (CIP)	no	no	no	no	n/a	n/a	n/a	n/a
Floodplain Management Plan	n/a	Yes	Yes	n/a	n/a	Yes	n/a	n/a
Stormwater Program / Plan / Ordinance	No	No	No	No	No	No	No	No
Community Wildfire Protection Plan (CWPP)	Yes Countywide Revised 2019	Yes Countywide Revised 2019	Yes Countywide Revised 2019	Yes Countywide Revised 2019	Yes Countywide Revised 2019	Yes Countywide Revised 2019	Yes Countywide Revised 2019	n/a
Erosion / Sediment Control Program	No	No	No	No	No	No	No	No
Economic Development Plan	No	No	No	No	No	No	No	No
Building Codes (Year)	Yes Commercial only	Yes	Yes	Yes	Yes	Yes IBC 2006	Yes	n/a
Site Plan Review Requirements	No	No	No	Yes	No	No	No	n/a
Zoning Ordinance (Land Use)	Yes Development in flood hazard areas	Yes Development in flood hazard areas	Yes Development in flood hazard areas	Yes	No	No	No	n/a
Subdivision Ordinance	Yes	No	No	No	No	No	No	Updated County Subdivision Regulations

Planning & Regulatory Tools (ordinances, codes, plans)	County	Dubois	Hudson	Lander	Pavillion	Riverton	Shoshoni	Changes since 2017? in 2017 and 2021
National Flood Insurance Program (NFIP) Participant	Yes Joined 7/8/75	Yes Joined 9/1/78	Yes Joined 7/17/78	Yes Joined 9/1/78	No	Yes Joined 9/1/99	Yes Joined 5/28/86	No
Flood Insurance Study / Flood Insurance Rate Map / DFIRM	Yes 2/5/2014	Yes 2/5/2014	Yes 2/5/2014	Yes 2/5/2014	No	Yes 2/5/2014	Yes 2/5/2014	No
Floodplain Ordinance	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Elevation Certificates for Floodplain Development	Yes	Yes	Yes	Yes	No	No	No	Required for any development within the mapped floodplain
Community Rating System (CRS) Participant	No	No	No	No	No	No	No	No
Open Space / Conservation Program	No	No	No	No	No	No	No	No
Growth Management Ordinance	No	No	No	No	No	No	No	No
Other Hazard Ordinance (steep slope, wildfire, snow loads, etc.)	No	No	No	No	No	No	No	No
Other	2016 Countywide EOP, 2016 Countywide THIRA, 2000 Flood Emergency Response Plan, South	No	No	No	No	No	No	No

Planning & Regulatory Tools (ordinances, codes, plans)	County	Dubois	Hudson	Lander	Pavillion	Riverton	Shoshoni	Changes since 2017?
	Pass City Historic Zoning (building appearance)							

7.1.2 Administrative and Technical Mitigation Capabilities

Administrative/Technical Resources	County	Dubois	Hudson	Lander	Pavillion	Riverton	Shoshoni	Changes since 2017?
Planning Board / Commission	Yes	No	No	Yes	No	No	No	No
Mitigation Planning Committee	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Maintenance Programs (tree trimming, clearing drainage, etc.)	No	No	No	No	No	No	No	No
Emergency Manager	Yes	No	No	No	No	No	No	No
Building Official	No	No	No	No	No	Yes	Yes	No
Floodplain Administrator	Yes	Yes	Yes	Yes	No	Yes	Yes	
Community Planner	Yes	No	No	No	No	No	No	No
Transportation Planner	No	No	No	No	No	No	No	No
Civil Engineer	No	No	No	No	No	No	No	No
GIS Capability	Yes	No	No	No	No	No	No	No
Warning Systems / Services (flood)	Yes	No	No	No	No	No	No	No
Warning Systems / Services (other / multi hazard)	No	No	No	No	No	No	No	No
Grant Writing / Management	No	No	No	No	No	No	No	No
Other:	County Drought Task Force, County HazMat Regional Response Team, Actively participated in MMMS	No	No	No	No	No	No	No

Administrative/Technical Resources	County	Dubois	Hudson	Lander	Pavillion	Riverton	Shoshoni	Changes since 2017?
	mapping effort							

7.1.3 Financial Capabilities

Table 25 identifies the County and Town financial tools or resources that the jurisdictions have access to or are eligible to use and could potentially be used to help fund mitigation activities. Lander is currently working with the U.S. Army Corps of Engineers on the design phase for a flood mitigation barrier. The design phase is expected to be completed by spring of 2023

Table 25 Fremont County and Jurisdictions Financial Capabilities

Financial Resources	Accessible/Eligible to Use (Yes/No)	Has This Been Used for Mitigation in the Past?
Levy for Specific Purposes with Voter Approval	No	No
Utilities Fees	No	No
System Development / Impact Development Fee	No	No
General Obligation Bonds to Incur Debt	No	No
Special Tax Bonds to Incur Debt	No	No
Open Space / Conservation Fund	No	No
Stormwater Utility Fees	No	No
Capital Improvement Project Funding	No	No
Community Development Block Grants (CDBG)	No	No
Other	No	No

7.1.4 Education and Outreach Capabilities

Table 26 shows the mitigation education and outreach capabilities the County and jurisdictions have in place now. Additional information shared by the HMPC is listed after the table.

Table 26 Jurisdictions Mitigation Education and Outreach Capabilities

Education & Outreach	Yes/No (And Briefly Describe)
Public Education /Outreach Program	No
Local Citizen Groups That Communicate Hazard Risks	No
Firewise	No
StormReady	Yes

Education & Outreach	Yes/No (And Briefly Describe)
Other?	No

7.1.5 Opportunities for Enhancement

Based on the capabilities assessment, Fremont County and the municipalities have several existing mechanisms in place that already help to mitigate hazards. There are also opportunities for the jurisdictions to expand or improve on their policies, programs and fiscal capabilities and further protect the community. As an example, the County became StormReady designated by the National Weather Service in recent years. Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and WOHS. Additional training opportunities will help to inform County and municipal staff members on how best to integrate hazard information and mitigation projects into their departments. Continuing to train staff on mitigation and the hazards that pose a risk to the County will lead to more informed staff members who can better communicate this information to the public.

Other opportunities include improved cross-jurisdictional communication on evacuation and awareness to mitigate life safety impacts during dam incidents, floods, or wildfires including the development of brochures and using existing communication capabilities through social media or other media. Other specific opportunities for improvement include:

- Update OEM's page on the county website to reflect links to Emergency Preparedness information specific to Fremont County, as well as the FEMA Emergency Preparedness website.

8 Mitigation Strategy

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

8.1 Mitigation Goals

Fremont County has identified goals to guide the development of the Hazard Mitigation Strategy. The potential hazards, risks and vulnerabilities were also considered in development of the goals. The goals and objectives of the Fremont County Local Hazard Mitigation Plan are to:

- Goal #1 Protect Life and Property from Hazard Impacts
 - Objective 1.1 Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural and technological hazards.
 - Objective 1.2 Reduce losses and repetitive damages for chronic natural hazard events while promoting insurance coverage for catastrophic natural hazards.
 - Objective 1.3 Improve hazard assessment information to allow informed decisions on and encourage preventative measures for existing development in areas vulnerable to natural hazards.
- Goal #2 Increase Public Awareness of Hazards
 - Objective 2.1 Develop and implement education and outreach programs to increase public awareness of the risks associated with natural and technological hazards.

- Objective 2.2 Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.
- Objective 2.3 Improve and expand hazard notification capabilities (new).
- Goal #3 Protect Natural Systems from Hazard Impacts
 - Objective 3.1 Balance watershed planning and natural resource management by using a “multiple use” strategy on public lands and other land use planning tactics with the outcome of natural hazard mitigation to protect life, property, and the environment.
 - Objective 3.2 Preserve, rehabilitate, and enhance natural systems under a multiple use strategy on public lands to serve natural hazard mitigation functions.
- Goal #4 Strengthen Partnerships related to Hazard Mitigation
 - Objective 4.1 Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation of the mitigation plan.
 - Objective 4.2 Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.
- Goal #5 Enhance Emergency Services and Reduce Impacts to Critical Infrastructure
 - Objective 5.1 Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.
 - Objective 5.2 Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.
 - Objective 5.3 Coordinate and integrate natural and technological hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

8.2 Mitigation Actions

This section provides updates on the actions identified in the 2017 Fremont County Multi- Hazard Mitigation Plan and new actions identified during the 2022 Regional Plan development.

8.2.1 Progress on 2017 Actions

During the 2022 planning process the Fremont County Planning Team reviewed all the mitigation actions from the 2017 plan. Of their 34 mitigation actions from 2017, 29 of the county actions are continuing or are implemented annually, demonstrating ongoing progress and building the community’s resiliency to disasters. Four (4) actions for municipalities that did not participate in the 2022 plan update are considered “continuing” should they decided to participate in future updates; these are detailed in Table 27. The following lists a deleted mitigation action.

Table 27 Completed and Deleted Mitigation Actions

2017 ID	Mitigation Action	Hazards Mitigated	Jurisdiction	Priority	Status/ Implementation Notes
Earthquake – 1	Secure items that may cause injuries from above through public education for households and through acquisition and installation of stabilizing braces and window	Earthquake	Fremont County	Low	Deleted due to cost effectiveness

2017 ID	Mitigation Action	Hazards Mitigated	Jurisdiction	Priority	Status/ Implementation Notes
	films for schools and critical facilities				concerns and low priority.

8.2.2 Identification and Implementation of Mitigation Measures

Fremont County has identified several potential hazard mitigation projects that would benefit the County and reduce potential risks and vulnerabilities. The proposed mitigation projects below listed in Table 28 have been discussed with the multi-jurisdictional HMPC. During the 2022 Regional Plan development of existing mitigation projects for Fremont County were assessed and determined whether the action was completed, ongoing/continued, or deleted. Reasons that some actions have not been completed include low priority, lack of funding, or lack of administrative resources. The HMPC's evaluation of action items and updated goals also lead to the addition of new strategies. The action plans were also shared amongst the regional plan participants to showcase progress and stimulate ideas amongst the respective planning committees in each county. Table 29 lists the hazard, the project, the priority, who the responsible agency is, the goal the project supports, and a possible funding source. The tables are separated into ongoing mitigation strategies from 2017, new mitigation strategies identified in 2022, and completed and deleted strategies from 2017. Mitigation actions for municipalities that did not participate in the 2022 plan update are considered "continuing" should they decided to participate in future updates.

Table 28 Fremont County Mitigation Action Plan

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-1	Goals: 3, 5 Lifelines: FWS	Upstream storage for shortage of water for irrigation and flood mitigation.	Drought	Fremont County	Fremont County Commissioners, Wyoming Water Development Commission; Tribes	2050	\$300,000,000 Wyoming Water Development Commission	Medium	Continue – In Progress. With drought conditions for 2022 listed as "abnormally dry", this issue remains a viable project but funding continues to plague progress on it.
F-2	Goals: 2, 3 Lifelines: FWS	Develop water conservation program/education	Drought	Fremont County, Town of Hudson, Town of Dubois City of Lander	Fremont County Extension Service, Hudson, Dubois and Lander administration	Annual Implementation	\$5,000 State of Wyoming	Medium	Continue – In Progress.
F-3	Goals: 3, 5 Lifelines: FWS	Develop groundwater supplies as an additional water resource during times of drought.	Drought	Fremont County, Town of Hudson, City of Lander, and Town of Shoshoni	Fremont County Commissioners, Wyoming Water Development Commission, Administration for Towns of Hudson, Lander, and Shoshoni	2025	\$3,000,000 Water Development Commission	Medium	Continue – Not Started. With drought conditions for 2022 listed as "abnormally dry", this issue remains a viable project but funding continues to plague progress on it.

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-4	Goals: 1, 2 Lifelines: NA	Public education on safety measures to take during an earthquake.	Earthquake	Fremont County	Fremont County Government, Fremont County EM	Annual Implementation	\$2,000 Fremont County EM	Low	Continue – In Progress. OEM website is in the process of updating and adding links for public education. Current links will lead to FEMA; NOAA/weather; Wyoming Road & Travel; Wildland Urban Interface that will provide information.
F-5	Goals: 1, 5 Lifelines: Trans	Culverts and Drainage Maintenance Project to mitigate damage to county road infrastructure	Flood	Fremont County	County Transportation Dept, Planning	Annual Implementation	No estimated cost Fremont County Transportation Dept., FHWA, WYDOT	High	Continue – In Progress. FCR&B is in the process of updating failed culverts. The price has doubled or tripled currently for culverts. We are also in the process of mapping/inventorying culverts.
F-6	Goals: 5 Lifelines: NA	Map historic flood plains outside FEMA FIRM areas and update county planning to limit development	Flood	Fremont County	County Planning	2023–2028	\$250,000. WOHS, County funds	Low	Continue – In Progress. This project has not moved forward as there is no real data available to support regulation

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
		within designated areas							outside FEMA mapped areas.
F-7	Goals: 1, 3, 5 Lifelines: NA	Popo Agie River flood prevention and stabilization	Flood	Fremont County, City of Lander	Lander City public works, Popo Agie Conservation District, NRCS	2022-2028	\$3,000,000 + Popo Agie Conservation District	High	Continue – In Progress. City of Lander is working with USACE on possible flood wall
F-8	Goals: 1 Lifelines: NA	Continued compliance with participation in NFIP	Flood	Fremont County, Towns of Hudson, Riverton, Lander, and Dubois	Fremont County Planning Commission, Administration and for Towns of Hudson, Riverton, Lander, and Dubois	Annual Implementation	\$5,000 WOHS	High	Continue – In Progress. Fremont County Planning continues to address any and all construction within the mapped FIRMs. Fremont County Planning assists local communities in addressing concerns regarding implementation of the NFIP in their jurisdictions.
F-9	Goals: 1, 5 Lifelines: Trans	Little Warm Springs Road Culvert Replacement	Flood	Fremont County, Town of Dubois	Town of Dubois Public Works, Fremont County Road Dept	2024	\$30,000	Medium	Continue – Not Started. This road is within Town limits. Fremont County has an easement with the right to maintain the road. Culverts may become silted in, and with high water may

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-10	Goals: 1, 5 Lifelines: NA	Taylor Creek Drainage Enhancements and stream stabilization (West View Park Subdivision)	Flood	Fremont County, Town of Dubois	County Transportation Dept., Town of Dubois Public works, WYDOT	2024	\$50,000	High	flood the road. Place overflow culvert? Coordination is needed with Fremont County Road Dept. This project should be engineered to mitigate harm to Dubois residents. Town of Dubois does not own the property and does not have an easement. Continue – Not Started. WYDOT engineers have been contacted to ascertain the degree that the State may be involved. The Town requests to know how to proceed. Requesting an application form to commence this project.
F-11	Goals: 1, 5 Lifelines: NA	North Heights Subdivision Drainage Enhancements	Flood	Fremont County, Town of Dubois	County Transportation Dept., Town of Dubois Public works	2024	\$90,000	Low	Continue – In Progress. In 2018 thirty-six culverts (\$7,490) were purchased. Some have been installed in

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-1 2	Goals: 1, 3, 4, 5 Lifelines: NA	Implement permanent flood mitigation projects along the Middle Fork of the Popo Agie recommended by Army Corp of Engineers in 2017	Flood	Fremont County, City of Lander, Town of Hudson	Fremont County Transportation Dept., City of Lander Public Works, Town of Hudson administration, ACOE	By 2025	Varies by project, ACOE, FEMA, local funds	High	Locations throughout the North Heights Subdivision to enhance the drainage. The project is expected to be completed by the end of 2023. Reimbursement has not yet been requested. Continue – In Progress. Homeowners at the Popo Agie Estates mitigated per FEMA. Fremont County R&B did not assist with this mitigation.
F-1 3	Goals: 1, 2 Lifelines: NA	Further identify and continue monitoring landslides in critical areas	Landslide	Fremont County, City of Lander, Town of Hudson	Fremont County Planning Commission, Wyoming State Geological Survey, WYDOT, Hudson, Lander,	Annual Implementation, particularly during wet cycles	\$500,000 Wyoming State Geological Survey, Wyoming Department of Transportation	Medium	Continue – In Progress. Town of Hudson has identified their water tower/main water supply would be at risk if a landslide happened near it. Landslides are addressed as they become evident that one is occurring in an

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-14	Goals: 1, 2 Lifelines: NA	Stabilize landslides that threaten the population or infrastructure of the County	Landslide	Fremont County	Fremont County Government, Wyoming Department of Transportation, University of Wyoming	Annual Implementation	\$1,000,000 + Fremont County EM	Medium	area that is populated, or infrastructure is threatened. Continue – In Progress. Landslides are addressed as they become evident that one is occurring in an area that is populated, or infrastructure is threatened.
F-15	Goals: 1, 5 Lifelines: NA	Refine identification of critical facilities in each community and further assess hazard vulnerability	Lightning, Flood, Earthquake, Landslide, Extreme Cold, Severe Winter Weather, Wildfire	Fremont County, Towns of Hudson, Riverton, Dubois, Lander, Pavillion, Shoshoni	County EM Towns of Hudson, Riverton, Dubois, Lander, Pavillion, Shoshoni	Annual Implementation	Funding through department budget	Low	Continue – In Progress. As part of HMP update. Continued maintenance and additional assessment on facilities identified in updated risk assessment
F-16	Goals: 1 Lifelines: ENG, FWS, HIM	Identify the need for generator receiver points for assisted living and nursing homes and encourage installation where applicable	Extreme Cold, Earthquake, Flood, High Winds, Lightning, Severe Winter	Fremont County	County EM Public health	Annual Implementation	Unknown at this time. Prices keep changing drastically due to inflation	Medium	Continue – Not Started. County EM will work with Public Health to complete this project

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-17	Goals: 1 Lifelines: FWS, HM	Improve planning for sheltering and evacuation of hospital and nursing homes in Wyoming Life Resource Center	Tornado, Wildfire	Fremont County	Wyoming Life Resource Center, City of Lander, County EM	2025	Wyoming Life Resource Center	Medium	Continue – In Progress. Changes to agencies/personnel involved, this project will become a re-start (Wy. Life Resource has had many changes, especially in facility/ building availability.
F-18	Goals: 1, 2, 5 Lifelines: Comm	Improved notification system and the ability to expand and adapt with new technologies	Flood, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire,	Fremont County	County EM and Dispatch	Annual Implementation	Funding through department budget	High	Continue – In Progress. ARPA funds have been requested to upgrade towers, replace WYOLINK radios which will improve communications in Fremont County.
F-19	Goals: 1, 2, 4, 5 Lifelines: Comm	Upgrade the radio system for school district to enable better communication with 1st responders	Earthquake, Flood, High Winds, Lightning, Severe Winter Weather,	Fremont County	County EM and Dispatch School District	Annual Implementation	Varies by needs of each system	Low	Continue – Not Started. Law Enforcement, Fire and EMS first responders are now moved ahead for slated interoperable radio replacement. Radio towers are also nearing end-of-life.

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-20	Goals: 5 Lifelines: ENG	Improved generator backup power capabilities for critical facilities	Tornado, Wildfire, Extreme Cold, Earthquake, Flood, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire,	Fremont County	County EM School District	Annual Implementation	Funding would have to come through each school district. Unknown amount.	Medium	Infrastructure for communications at responder level will take precedence. Continue – In Progress. Funding is always limited; COVID-19 has contributed heavily to prioritizing how what funding is available is spent.
F-21	Goals: 5 Lifelines: ENG	Identify and acquire generators and/or hook ups for school districts buildings to increase public shelter areas	Extreme Cold, Earthquake, Flood, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire,	Fremont County	County EM School District	Annual Implementation	Funding would have to come through each school district. Unknown amount.	Medium	Continue – In Progress. County will follow up with school districts
F-22	Goals: 1, 2, 4, 5 Lifelines: SS, HM, FWS	Develop and incorporate into the plan a list of hazard exposure	Expansive Soils, Flood, Landslide	Fremont County	Fremont County Planning Commission,	Annual Implementation	\$40,000 WOHS, FEMA, County and local	High	Continue – In Progress. Fremont County Planning reviews and

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
		<p>factors for consideration when locating and planning construction of public structures, including critical facilities</p>			<p>Fremont County Government, Towns of Hudson, Lander, Riverton, and Shoshoni</p>		<p>jurisdictions staff time for administration of floodplain ordinances for the County, Hudson, Lander, Riverton and Shoshoni</p>		<p>administers the County Subdivision Permitting process as well as the Floodplain Zoning Regulation for those areas outside the City Limits. State Statute requires the local Conservation Service provide a letter and recommendation to the Planning Commission regarding soils in any proposed Subdivision. Those recommendations are included in the Staff Report of the Subdivision and a copy of the Soils Report is included in the Subdivision Permit. This does not include mine subsidence or avalanches. No construction is allowed in a mapped floodway unless an H&H study has been</p>

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-23	Goals: 1, 2 Lifelines: NA	Public education about local hazards including Avalanche, Dam Failure, Drought, Earthquake, Expansive Soils, Extreme Cold, Flood, Hail, Hazardous Materials, High Winds, Landslide, Lightning, Mine Subsidence, Severe Winter Weather, Tornado, Wildfire	Avalanche, Dam Failure, Drought, Earthquake, Expansive Soils, Extreme Cold, Flood, Hail, Hazardous Materials, High Winds, Landslide, Lightning, Mine Subsidence	Fremont County Towns of Hudson, Lander, Riverton, Pavillion and Shoshoni	Fremont County Emergency Management (EM), Towns of Hudson, Lander, Riverton, Pavillion and Shoshoni administration	Annual Implementation	\$2,500 Fremont County EM	Medium	conducted to ensure no change to Base Flood Elevation is caused by the construction, this includes Public or critical structures, and any development in the floodplain requires a elevation certificate in compliance with the Floodplain Zoning Regulations. Continue – In Progress: OEM website is in the process of updating and adding links for public education. Current links will lead to FEMA; NOAA/weather; Wyoming Road & Travel; Wildland Urban Interface that will provide information.

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-24	Goals: 1, 2 Lifelines: NA	Public education about local building, fire codes, earthquake, and flood proofing standards	Severe Winter Weather, Tornado, Wildfire Earthquake, Hail, High Wind, Lightning, Severe Winter Weather, Wildfire,	Fremont County, Towns of Hudson and Dubois, City of Lander	Fremont County EM, Dubois, Hudson, Lander, administration	Annual Implementation	\$2,500 Fremont County Planning	Medium	Continue – In Progress.
F-25	Goals: 1, 2 Lifelines: Comm	Encourage the purchase of Weather Radios for notification of hazardous conditions including Drought, Extreme Cold, Flood, Hail, Hazardous Materials, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire	Drought, Extreme Cold, Flood, Hail, Hazardous Materials, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire, Hazardous Materials	Fremont County	Fremont County EM, Individuals in the population	Annual Implementation	\$1,000 Fremont County EM	High	Continue – In Progress. OEM website is in the process of updating and adding links for public education. Current links will lead to FEMA; NOAA/weather; Wyoming Road & Travel; Wildland Urban Interface that will provide information.
F-26	Goals: 1, 2 Lifelines: NA	Educate public on severe weather hazards including	Drought, Extreme Cold,	Fremont County	Town of Shoshoni Administration,	Annual Implementation	\$1,000	Medium	Continue – In Progress. Will always be ongoing public

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-27	Goals: 1, 2 Lifelines: NA	the needs for personal safety and self-sufficiency for at least 72 hours	Flood, Hail, Hazardous Materials, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire, Hazardous Materials, Wildfire	Fremont County	in partnership with Fremont County EM	Annual Implementation	\$1,000 Fremont County EM	High	education. OEM website is in the process of updating and adding links for public education. Current links will lead to FEMA; NOAA/weather; Wyoming Road & Travel; Wildland Urban Interface that will provide information.
F-27	Goals: 1, 2 Lifelines: NA	Encourage purchase of 72-Hour Kits and educate public on need for kits	Drought, Extreme Cold, Flood, Hail, Hazardous Materials, High Winds, Lightning, Severe Winter Weather, Tornado, Wildfire, Hazardous Materials	Fremont County	Fremont County EM	Annual Implementation	\$1,000 Fremont County EM	High	Continue – In Progress. OEM website is in the process of updating and adding links for public education. Current links will lead to FEMA; NOAA/weather; Wyoming Road & Travel; Wildland Urban Interface that will provide information.

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-28	Goals: 1, 4 Lifelines: NA	Improve fuel hazard assessments in identified communities at risk countywide.	Wildfire	Fremont County, Town of Hudson, Town of Dubois City of Lander	Local Fire Departments Firewise WY State Forestry	Annual Implementation	\$100,000	High	Continue – In Progress. Western Wildland Urban Interface Grant Program is the primary funding source used to provide Wildfire hazard mitigation for residents of Fremont County. It is a cost-share program available to homeowners for fuel mitigation and forest health activities.
F-29	Goals: 1, 2, 4 Lifelines: NA	Educate public on Wildfire/urban interface and encourage reduction of fuels loads.	Wildfire	Fremont County Town of Hudson, Town of Dubois City of Lander	Fremont County EM, all Fire Districts, FIREWISE, municipal administration	Annual Implementation	Funded through grants annually United States Forest Service Western Wildland Urban Interface Grant Program, Bureau of Land Management,	High	Continue – In Progress. Western Wildland Urban Interface Grant Program is the primary funding source used to provide wildland fire hazard mitigation for residents of Fremont County. It is a cost-share program available to homeowners for fuel mitigation and forest health activities.

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
F-30	1, 5 Safety & Security, Food, Water, Shelter, Health & Medical, Energy, Transportation	Union Pass Landslide mitigation. Union Pass is located on the Wind River Range of Fremont County. It is a heavily populated area with numerous subdivisions. There is one road leading into/out of the Union Pass communities, and this road is along a documented landslide area. In order to ensure first responder access, evacuation routes for residents, and secure long-term safety and access, the landslide area requires rebuilding and mitigation to reduce the potential for	Landslide/ Rockfall/ Debris Flow	Fremont County	Fremont County Transportation Department, Fremont County EMA	2024-2026	Bureau of Indian Affairs \$1,500,000; Capital Improvement Plan	Medium	New in 2022

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
		damage to the access road.							

Table 29 Town of Pavillion Mitigation Actions

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
P-1	Goals: 1, 4, 5 Lifelines: NA	Replace current water meters with new energy efficient system with remote read to reduce water system loss and enhance drought resilience	Drought	Town of Pavillion	Town of Pavillion, EPA, SLIB, Safe Water Revolving Funds	To be determined	\$215,000	Low	Continue – Not Started.
P-2	Goals: 2 Lifelines: Comm	Update/install a warning system	All Hazards	Town of Pavillion	Town of Pavillion	To be determined	\$75,000	Low	Continue – Not Started.
P-3	Goals: 1, 2 Lifelines: Comms, SS	Review and implement appropriate regulations with regards to mitigation of new development in WUI communities such as roads with adequate emergency ingress/egress and ignition resistant building construction	Wildfire	Town of Pavillion	County Planning	2025	Low cost; staff time and existing resources	Low	Continue – Not Started.

ID	Goal(s) and Lifelines	Action Description	Hazard(s) Mitigated	Jurisdiction	Lead Agency and Partners	Timeline	Cost Estimate and Potential Funding	Priority	Status/ Implementation Notes
P-4	Goals: 1, 2, 3, 5 Lifelines: SS	Annual fuels treatment to create a fire break around Pavillion	Wildfire	Town of Pavillion	Town of Pavillion	Annual Implementation	\$5,000	Low	Continue – Not Started.

9 Implementation

Moving forward the County will use the mitigation action table in the previous section to track progress on implementation of each project. Some progress has been made since the plan was originally developed in 2007-8 and will continue to be tracked over time. Implementation of the plan overall is discussed in Chapter 6 in the Regional Plan.

The Fremont County HMPC formed during the 2022 Regional Plan development will be responsible for implementing and reviewing the plan action items. The HMPC will meet no less than semi-annually, or as time permits.

The Fremont County Commissioners and the Mayor of all cities and towns (except where noted in Section 1) in Fremont County will adopt the Region 5 Hazard Mitigation Plan and each jurisdiction will take responsibility for plan implementation of mitigation issues arising in their jurisdictions. Plan implementation and evaluation will be a shared responsibility among the HMPC. The Fremont County EM Coordinator will serve as a convener to facilitate the HMPC meetings and will assign tasks such as updating and presenting the Plan to the members of the group.

9.1 Incorporation into Existing Planning Mechanisms

Also, discussed in Chapter 6 is the importance of implementation and incorporation of the principles of this plan into other planning mechanisms.

During the 2022 planning process the HMPC discussed the importance of coordinating the mitigation plan with other planning processes, and vice versa. The group noted that the CWPP and County EOP acknowledges the HMP. The THIRA also sources the hazards information in the HMP.

As described in the capability assessment, the County and municipalities already implement 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:

- County or community comprehensive or land use plans
- County or community development codes
- County or community Emergency Operations Plans
- THIRA
- CWPP
- Capital improvement plans and budgets including County Road/Bridge projects
- Recovery planning efforts
- Watershed planning efforts
- Wildfire planning efforts on adjacent public lands
- Firewise planning
- Master planning efforts
- River corridor and greenway planning efforts in Lander
- WYDOT rockfall and landslide mitigation efforts
- Office of State Lands and Investments Drinking Water or Clean Water Intended Use Plan
- Other plans, regulations, and practices with a mitigation aspect

9.2 Funding Sources

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.

Local Government

- General revenues in the form of matches.
- County and Municipal Utility Authorities.

State of Wyoming

- Community Development Block Grant Program.
- Federal Mineral Royalty Capital Construction Account.
- Office of State Lands and Investments grants and loans
- Wyoming Water Development Program.
- State and Community Highway Safety, Department of Transportation.
- Transportation Enhancement Activities Local (TEAL).
- Wildfire Mitigation Grant (State Forestry Division).

Federal Government Agency Programs

- FEMA Hazard Mitigation Assistance Grants including:
 - Building Resilient Infrastructure and Communities (BRIC)
 - Pre-Disaster Mitigation (PDM).
 - Flood Mitigation Assistance Program (FMA).
 - Hazard Mitigation Grant Program (HMGP).
 - Notice of funding availability typically released in June with applications due in October/November of each year.
 - HMPG is dependent on federally declared disasters within the State and funding amount is based on a percentage of disaster relief costs.
- 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.

9.3 Monitoring, Evaluating and Updating the Plan

Fremont County will follow the procedures to review and update this plan in accordance with Region 5 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 Fremont County Annex to the Region 5 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.