



Gem County Idaho

Community Wildfire Protection Plan

2025



Gold Run Fire 2023

This document is intended to be used for coordination and collaboration only.

The 2025 Gem County CWPP is not a decision document.

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Declaration of Concurrence



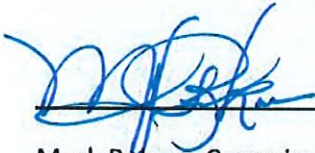
Kirk Wille, Commissioner Chairman
Gem county Board of County Commissioners

Date



Bill Butticci, Commissioner
Gem County Board of County Commissioners

Date



Mark Rekow, Commissioner
Gem County Board of County Commissioners

Date

Mike Welch, Fire Chief
Gem County Fire Protection District I

Date



3/6/25

Tyre Holfeltz, Community Fire Program Manager
Idaho Department of Lands

Date



3-13-25

Introduction

This Community Wildfire Protection Plan is the update to the 2009 Gem County CWPP, as well as the 2018 All Hazards Mitigation Plan (AHMP). This CWPP will be incorporated into the next update of the Gem County AHMP in the wildfire section and in the appendices.

Planning Participants

Gem County Emergency Management	USDA- U.S. Forest Service
Gem County Fire Protection District I	NOAA Boise
Gem County Fire Protection District II	USACE United States Army Corps of Engineers
Idaho Department of Lands	
City of Emmett Fire Department	
Gem County Development Services	
Gem County Road and Bridge	
Gem County LEPC (Local Emergency Planning Committee)	

County Description

Governance Structure

The Gem County governance structure consists of the board of county commissioners, consisting of three elected commissioners. The Board of County Commissioners govern the unincorporated areas of Ola, Sweet, Montour, Letha, Hanna, and the Van Deusen area. The Sheriff's office is the county Law Enforcement agency. There are two fire protection districts in Gem County. Gem County Fire Protection District I is responsible for all areas outside of Emmett, Gem County Fire District II covers the Northern part of Gem County from the East side of the Squaw Butte (Sehewoki'i Newenee'an Katete) to the Valley County and Boise County lines, including Montour, Sweet, and Ola. The City of Emmett has an elected Mayor, and elected City Council members. The City of Emmett also has a Police department, and a City Fire Department.

Geography

Gem County consists of roughly 566 square miles, with elevations ranging from 2,149 feet to 8,294 feet with an average of 3,839 feet. The terrain in Gem County generally level to gently sloping, the county consists of the valley floor in Emmett to the higher peaks in the northern panhandle of the county above Ola. Forty-Three Percent (43%) of the county, approximately 154,722 acres is public land which includes Federal, State, Gem County and Emmett City owned property. There are approximately 953 acres in unincorporated Gem County that are classified as Bare Forestland, or Productive Forest. Counties that boarder Gem County are Ada, Adams, Boise, Canyon, Payette, Valley, and Washington Counties.

Current Population and Population Trends

The total population in Gem County has increased from 16,719 in 2010 to 19,123 in 2020. This 14% increase has largely occurred over the past 5 years as a likely result of growth in the surrounding areas of Boise, Star, Meridian, and Nampa. Gem County has experienced less population growth from 2010 to 2020 as compared to other counties in the greater Treasure Valley region.

Climate

Just as the topography and geography vary in the county, so does the climate. The Northern areas of the county receives more rainfall and snow than the Southern areas. For example; the average annual rainfall in Ola is approximately 23 inches, while the Emmett Valley averages 13 inches of rain. Emmett is typical of semi-arid Payette River Valley, with warm dry Summers and Winters that are usually relatively mild. The average range of temperatures in the valley is from about 18 degrees in the Winter to the mid to upper 90's in the Summer months.

The temperatures in the areas of Gem County outside of Emmett are very much the same, however snowfall in the Emmett Valley averages around 17 inches annually, while the Northern Ola area is around 71 inches.

Vegetation

Gem county has a wide range of vegetative types that were historically influenced by moisture. However, through settlement of landscapes and change from unmanaged to developed and highly managed landscapes resulting in vegetative types that have transitioned or been replaced in many ecosystems throughout the County. Specifically, in relatively flat geographic locations ecotypes are now either urban development, crop lands, or hay and pasture. These lands typically occur in the southwest portion of the county, with other pockets found to the north and northeast. Grass and shrub ecotypes encompass the majority of the county to include native and non-native grasses. The primary woody brush in the county is sagebrush intermixed with Juniper. The Juniper has expanded in recent decades due to fire exclusion and other land management activities to include grazing. As is typically with elevation increase the presence of conifer species becomes more prevalent. The particular species is determined largely by the moisture available at any given site and the aspect to which the slope is oriented. More mesic sites are dominated by Ponderosa Pine and where more moisture is present there is an increase in the presence of Douglas fir. At higher elevations where sites are strongly influenced by short growing seasons and an abundance of snow are found Spruce. The conifer types are widely found throughout the county by are more heavily represented in the northern portion of the county. Intermixed amongst all the forest and woodland types are meadows dominated by native grasses and at lower elevations and highly disturbed sites with non-native invasives. The presence of the later is strongly influenced by fire occurrence, as the non-natives are able to recruit within post fire sites more rapidly than the native elements. The grass, tree, and shrub vegetation in the rangeland areas of the county serve not only grazing lands for sheep and cattle, but serve as winter range for deer and elk, and a small wildhorse

population (41). The grass and shrub vegetation are also instrumental in providing stability to and preventing soil erosion.

Geology and Topography

The terrain varies greatly across the county. Elevations range from 2,238 feet in the low-lying Emmett Valley, to 7,901 feet of the steep peaks in the Northern part of Gem County above Ola. The Western area of Gem County lies within the Western Snake river Plain and the Western Idaho Basin, a geographically-defined, sub-surface mineral area. The steep slopes, high peaks, and roadless area make it difficult to combat fire. The movement of air from canyons and gulches increase the speed in which a fire will travel, and the topography of Northern Gem County increases those scenarios with its south facing slopes, and steep peaks.

Wildlife

Gem County has over 80 different species of mammals occupying the county's wide variety of habitats. The Idaho Department of Fish and Game manages wildlife population and the USDA-Forest Service, Bureau of Land Management, U.S. Army Corps of Engineers, and the Idaho Department of Lands are responsible for wildlife habitats on lands they manage. Large mammals that are found in Gem County include: Mule Deer (*Odocoileus hemionus*), whitetail deer (*Odocoileus virginianus*), pronghorn (*Antilocapra americana*), elk (*Cervus elaphus*), mountain goat (*Oreamnous americanus*), black bear (*Ursus americanus*), moose (*Alces alces*), Mustang Horses (*Equus ferus caballus*), mountain lion (*Puma concolor*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), wolverine (*Gulo gulo*), and gray wolf (*Canis lupus*). Other mammals within the county are snowshoe hare (*Lepus americanus*), cottontail rabbit (*Lepus sylvaticus*), red fox (*Vulpes Vulpes*), badger (*Taxidea taxus*), beaver (*Castor Canadensis*), pine marten (*Martes americana*), North American porcupine (*Erethizon dorsatum*), striped skunk (*Mephitis mephitis*), Piute Ground Squirrel "Whistle Pig" (*Uroditellus mollis*) and several species of squirrels and bats.

Recreation

Gem County's rural environment with wide open spaces and recreation is a contributing factor to the quality of life. Recreationists use the federal and state and county lands for motorcycling, snowmobiling, camping, fishing, boating, hiking, and big game and bird hunting.

The popularity and easy access to such lands has implications for wildland fire and forest management. Improperly extinguished campfires are a common source of wildfire. When combined with the topography and fuels of the area, it can make fire spread even faster, and given the difficulty to access the higher mountain areas, a wildfire can get out of control quickly.

In addition to the public parks and their 104 acres of land, there are nearly 40 acres of Parks in the unincorporated County within the Black Canyon Reservoir along the Payette River. The five Black Canyon Parks are owned and managed by the Bureau of Reclamation, and are mostly used for boating, fishing, and water sports.

Alongside the formal parks, Gem County has an abundance of public lands, trail networks, and other recreation amenities such as Little Gem Cycle Park (BLM), Fishing Ponds (F&G), hiking trails mostly within the BLM and Boise National Forest owned and managed land. Sage Hen Reservoir is a 270 acre reservoir and recreation area with hiking trails and off-road vehicle trails. (Boise NF).

Hydrology

The Payette River is the major waterway of Gem County and a tributary of the Snake River. Various creeks, drains and canals traverse the county in addition to the Payette River. Among these are Squaw Creek, a tributary of the Payette River that runs the North-South length of Gem County. Other creeks tributary to the Payette River include Anderson Creek, Antelope Creek, Bear Creek, Bent Creek, Bissel Creek, Bristol Creek, Sucker Creek, Timber Creek, and Timber Flat Creek.

During Irrigation Season, much of the creek flow is diverted to the Farmers Co-Op Canal, The Drainage Canal, and the Last Chance Canal. There are two Reservoir’s in Gem County, The Black Canyon Reservoir, and Sagehen Reservoir.

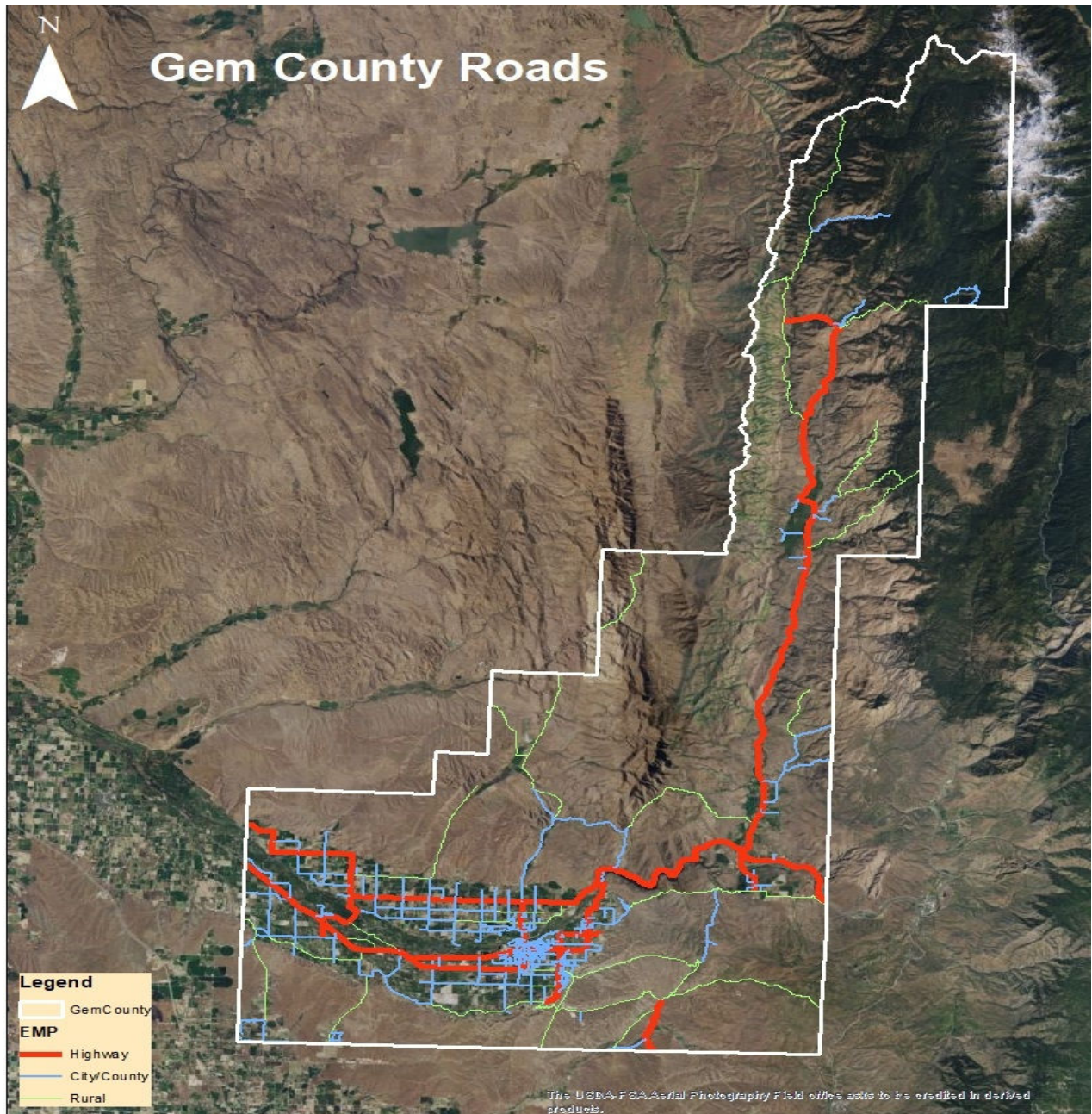
Transportation and Commuting

Gem County makes use of a very limited amount of Idaho State Highways. Although Highway 16 is slated for improvements, in 2025 State Highway 16 is a two lane highway, and is the North-South access into and out of Gem County to Ada or Canyon Counties. Highway 52 is a two lane highway that runs East-West, and is the County access to the Snake River Valley and all counties located West of Gem, (also the Oregon border). Highway 52 also connects Gem County to Boise County and Highway 55 to Northern Idaho. Due to recreation in Gem County, the Payette River, Black Canyon Reservoir, Little Gem Cycle Park, and numerous other opportunities to enjoy the outdoors, Highway 16 and Highway 52 are well traveled by tourists visiting Gem County or traveling to Valley County and the access to Highway 55 in Neighboring Boise County.

State Highways	Connection Rd	Direction
Highway 16		North-South
Highway 52		East-West
Highway 52/Washington Ave	Highway 16	North-South
Major Roads	Connection Rd	Direction
Sweet-Ola Highway	Highway 52	North-South
Montour Rd.	Highway 52	North-South
Third Fork Rd	Sweet-Ola Highway	North-South
Van Duesen/Big Flat Rd.	Highway 52	North-South
Black Canyon Highway	Highway 52	East-West
Hanna Ave.	Black Canyon Highway	North-South
Upper Ave.	Hanna Ave.	East-West

Idaho Blvd.	Highway 52	East-West
Dewey Rd.	Highway 52	East-West
Tom's Cabin Rd.	Highway 52	North-South
Bowman Rd.	Highway 52	North-South
Little Freezeout Rd.	Tom's Cabin Rd.	North-South
El Paso Rd.	Dewey Rd.	North-South
Old Freezeout Rd	Johns Ave.	North-South
Substation Rd.	Highway 16	North-South
Secondary Roads	Connection Rd	Direction
Dodson Pass	Third Fork Rd.	East-West
Nesbitt Ln.	Third Fork/Second Fork Rd.	East-West
Second Fork Rd	Sweet-Ola Highway	North-South
Sage Hen Reservoir Rd.	Second Fork Rd.	East-West
Holbrook Ln.	Sweet-Ola Highway	East-West
Dry Buck Rd.	Brownlee Rd.	East-West
Butte Rd.	Spring Creek/Van Deusen Rd.	East-West
Sucker Creek Rd.	Van Deusen Rd./ Big Flat Rd.	East-West
Spring Creek Rd.	Highway 52	North-South
Plaza Rd	Main Street/Highway 52	North-South
Sand Hollow Rd.	Highway 52	East-West
Pearl Rd	Jack Ass Gulch Rd.	East-West
Waterwheel Rd.	Plaza/Sub Station Rd.	East-West
Locust St.	Substation Rd./Johns	East-West
Main St.	Substation/Mill Rd.	East-West
4th St.	Substation/Mill Rd	East-West
12th St.	Substation/Mill Rd	East-West
Cherry Ln.	Highway 52/Substation Rd	East-West
Johns Ave.	Highway 16/Old Freezeout	North-South
Mill Road	Highway 52/Main	North-South
Star Ln.	Highway 52/South Slope	North-South
Mesa Ave.	Black Canyon Highway	North-South
Central Rd.	Highway 52	East-West
Sunset Dr.	Highway 52	East-West
Cascade Rd.	Main St/Highway 52	East-West
Hillview Rd.	Hanna Ave.	East-West
Sales Yard Rd.	Substation/Star Ln.	East-West
South Slope Rd.	Old Freezeout/Tom's Cabin	East-West
Airport Rd.	Highway 52	North-South
Star Ln.	Highway 52	North-South
Little Rock Rd.	Highway52	North-South
Bishop Rd.	Highway52	North-South

Minor Roads	Connection Rd	Direction
High Valley Rd.	Sweet-Ola Highway	East-West
Brownlee Rd.	Sweet-Ola Highway	East-West
Frozen Dog Rd.	Plaza Rd	East-West
Shaleroock Rd.	Frozen Dog Rd./Montour Rd	East-West
Gatefield Rd.	Shaleroock Rd./Montour Rd.	East-West
Jackass Gulch Rd.	Highway 16	East-West
Chaparral Rd	Highway 16	East-West
Willow Creek Rd.	Highway 16	East-West



Vulnerability

Population

There are no recorded incidents of loss of life from wildfires within the planning area. Given the immediate response times to reported fires, the likelihood of injuries and casualties is minimal; therefore, injuries and casualties were not estimated for the wildfire hazard.

Smoke and air pollution from wildfires can be a severe health hazard, especially for sensitive populations, including children, the elderly and those with respiratory and cardiovascular diseases. Smoke generated by wildfire consists of visible and invisible emissions that contain particulate matter (soot, tar, water vapor, and minerals), gases (carbon monoxide, carbon dioxide, nitrogen oxides), and toxics (formaldehyde, benzene). Emissions from wildfires depend on the type of fuel, the moisture content of the fuel, the efficiency (or temperature) of combustion, and the weather. Public health impacts associated with wildfire include difficulty in breathing, odor, and reduction in visibility.

Wildfire may also threaten the health and safety of those fighting the fires. First responders are exposed to the dangers from the initial incident and after-effects from smoke inhalation and heat stroke.

Property

Loss estimations for the wildfire hazard are not based on damage functions, because no such damage functions have been generated. Instead, loss estimates were developed representing 10 percent, 30 percent and 50 percent of the assessed value of exposed structures. This allows emergency managers to select a range of economic impact based on an estimate of the percent of damage to the general building stock. Damage in excess of 50 percent is considered to be substantial by most building codes and typically requires total reconstruction of the structure.

Critical Infrastructure

Critical facilities of wood frame construction are especially vulnerable during wildfire events. In the event of wildfire, there would likely be little damage to most infrastructure. Most roads and railroads would be without damage except in the worst scenarios. Power lines are the most at risk from wildfire because most poles are made of wood and susceptible to burning. Fires can create conditions that block or prevent access and can isolate residents and emergency service providers. Wildfire typically does not have a major direct impact on bridges, but it can create conditions in which bridges are obstructed. Many bridges in areas of high to moderate fire risk are important because they provide the only ingress and egress to large areas and in some cases to isolated neighborhoods.

Wildland-Urban Interface

A key component in meeting the underlying need for protection of people and structures is the protection and treatment of hazards in Wildland-Urban Interface (WUI). Gem County has adopted the Idaho Department of Lands Definition of the WUI.

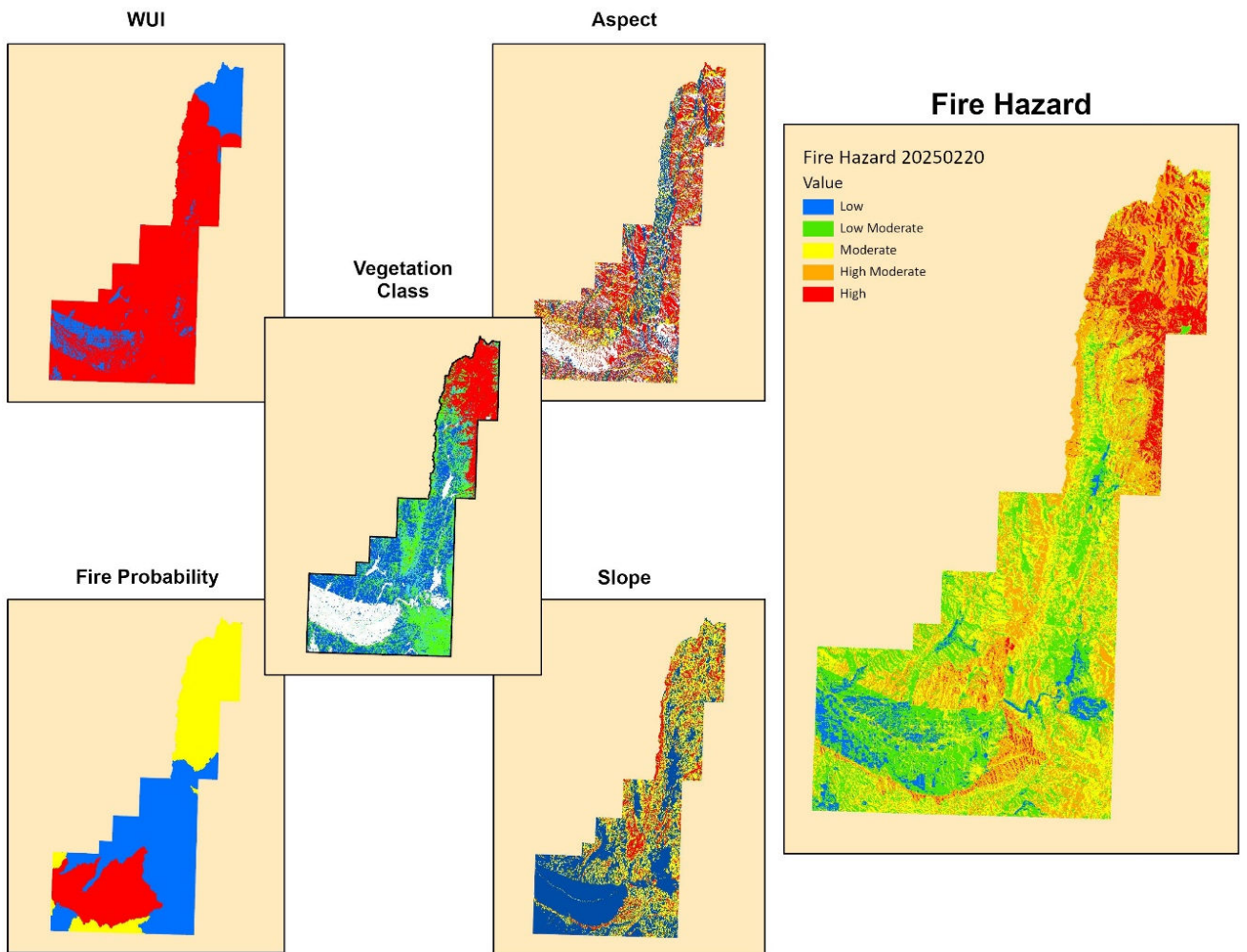
Definition: Wildland-Urban Interface

An area where developed lands interact with undeveloped lands and includes the infrastructure and natural resources that communities rely on for existence.

Location: The Wildland-Urban Interface (WUI) is found in remote, scattered development areas to highly developed urban areas and everywhere in between.

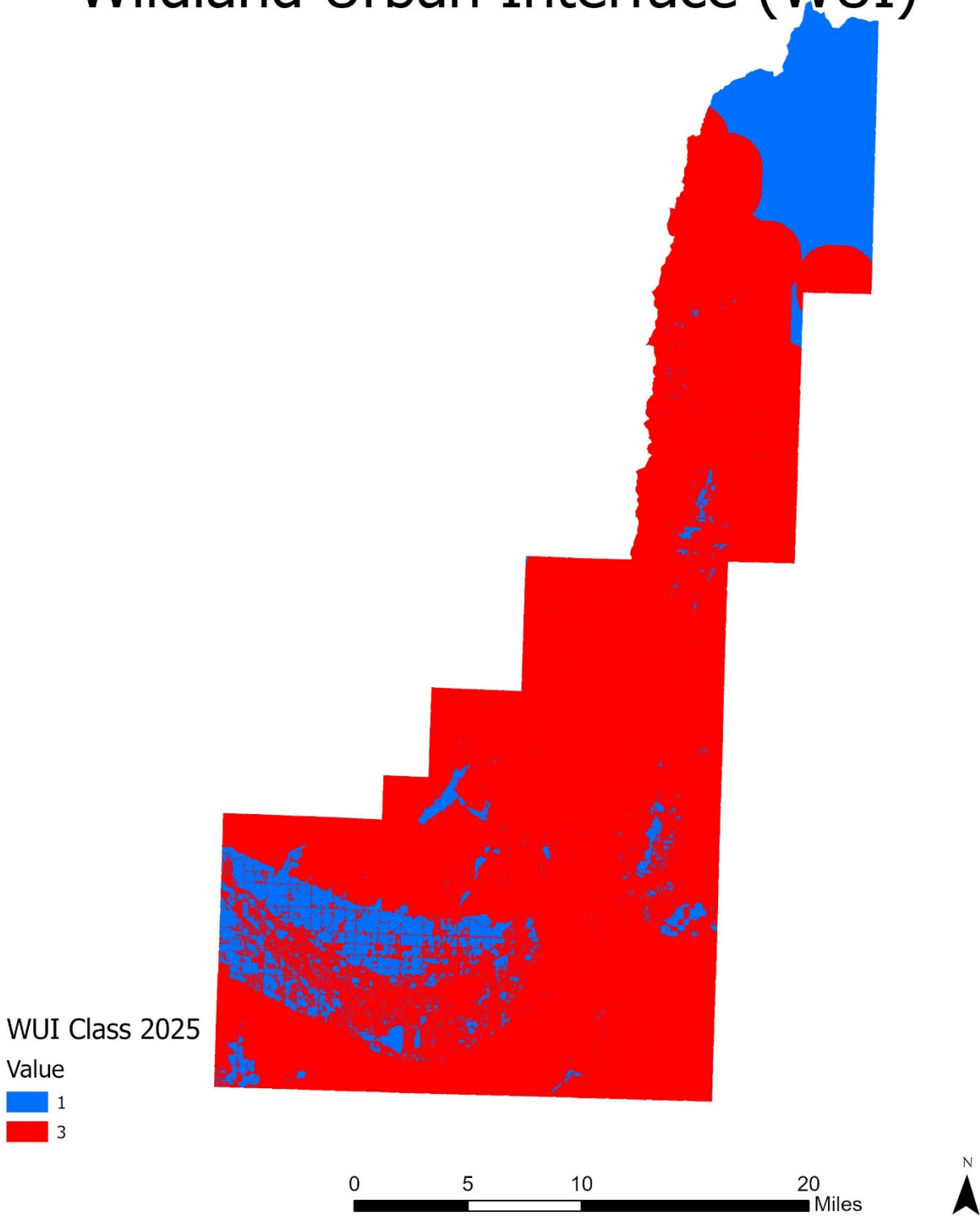
Mapping: The use of natural occurring brakes in the landscape are encourage, i.e. HUC12 is a well-established standard for a variety of mapping process.

1. All private land is extracted from the BLM ownership layer
2. Private Lands are buffered with a 1.5-mile buffer
3. The 1.5-mile buffer is put over the top of HUC12 watersheds
4. Those watersheds that by ocular estimation are more than 50% encompassed by the 1.5-mile buffer are selected.
5. Finally, the 1.5-mile buffer is extended to the selected HUC12's to create the final WUI for the county.



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Wildland Urban Interface (WUI)

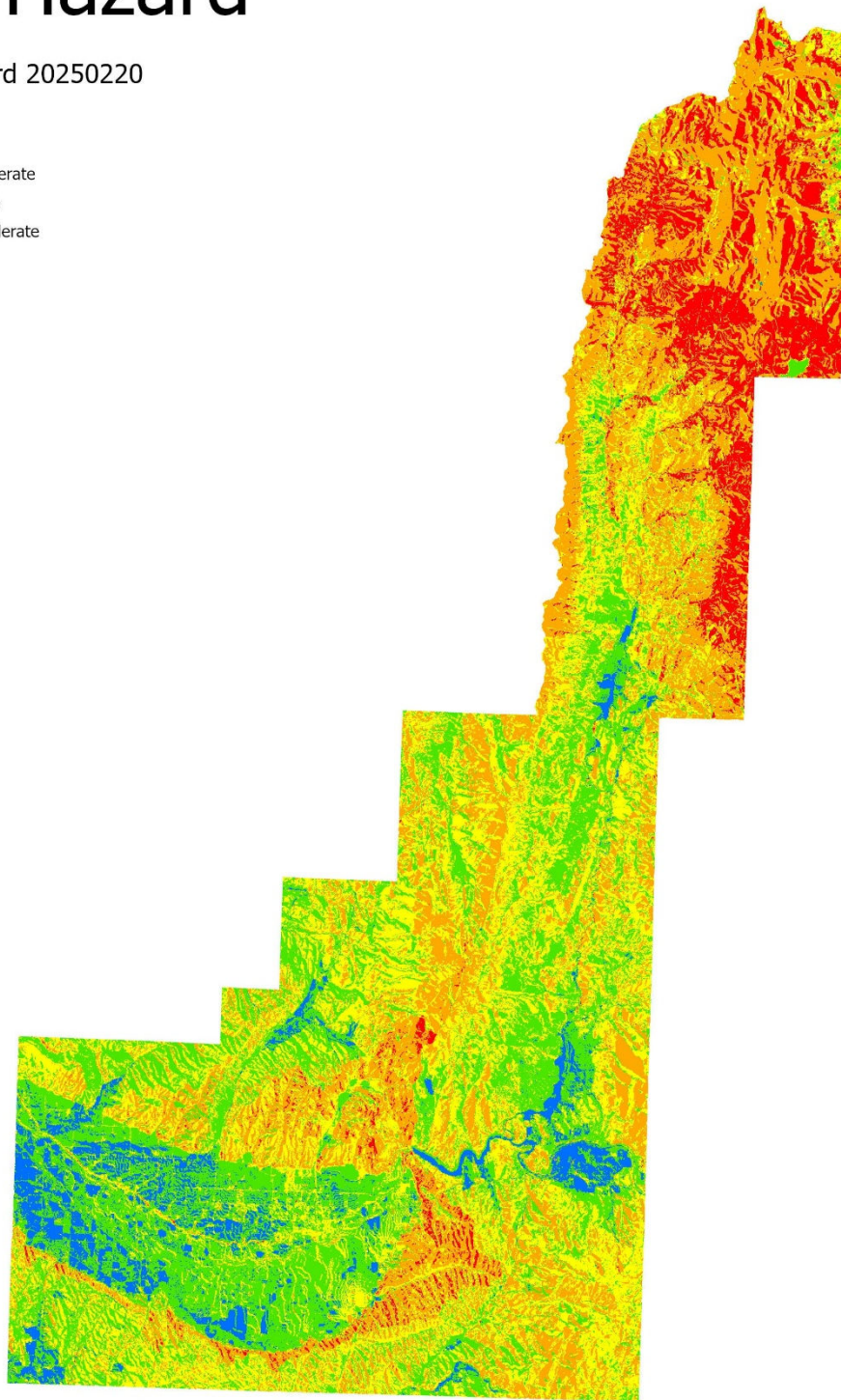


Fire Hazard

Fire Hazard 20250220

Value

- Low
- Low Moderate
- Moderate
- High Moderate
- High



0 5 10 20 Miles



Planned Mitigation Projects

Project Name	Description	Measurement	Start Time	Agency	Cost (est)
Big Willow Fuel Break	Linear fuel breaks North of Emmett	80 miles, 4,000 acres 200ft each side of road	2025-2030	Gem, Payette, Washington Counties, BLM-Boise Dist., IDL	\$4,000,000
West HW 52	Linear fuel breaks West HW 52	5 Miles, both sides of road	Spring 2025	GCFD #1	\$3,000
South HW 16	Linear fuel breaks South HW 16, Next to the road.	5 Miles, both sides of road	Spring 2025	GCFD #1	\$5,000
Harvest Valley Sub	Perimeter fuel breaks (WUI)	40 acres perimeter	Spring 2025	Emmett City Fire	\$1,000
Highland Hollows	Perimeter fuel breaks (WUI)	30 acres perimeter	Spring 2025	Emmett City Fire	\$1,000
4th Street Gardens	Perimeter fuel breaks (WUI)	10 acres perimeter	Spring 2025	Emmett City Fire	\$1,000
Valor Health	Fuel Breaks-Behind Hospital Grounds (WUI)	20 acres perimeter	Spring 2025	Emmett City Fire	\$1,000
Locust St.	Fuel Breaks-(WUI)	1 mile, both sides of road	Spring 2025	Emmett City Fire	\$1,000
12th St	Fuel Breaks-(WUI)	1 mile, both sides of road	Spring 2025	Emmett City Fire	\$1,000
Twin Buttes Sub	Perimeter fuel breaks, foothills and land surrounding. (WUI)	20 acres perimeter	Spring 2025	Emmett City Fire	\$5,000
Lilac Ln Sub	Perimeter fuel breaks, foothills and land surrounding. (WUI)	20 acres perimeter	Spring 2025	GCFD #1	\$5,000
Picket's Corral Sub	Perimeter fuel breaks, foothills and land surrounding. (WUI)	20 acres perimeter	Spring 2025	GCFD #1	\$5,000
Hidden Hollow Sub	Perimeter fuel breaks, foothills and land surrounding. (WUI)	20 acres perimeter	Spring 2025	GCFD #1	\$3,000
Spring Creek Rd	Fuel Breaks-Linear fuel breaks on both sides of road.	5 miles, both sides of road	Spring 2025	GCFD #1	\$5,000
Old freezeout Rd	Linear Fuel Breaks	2 miles, both sides of road	Spring 2025	GCRB	\$2,000

Community Education and Outreach

Community outreach and education is a huge way of getting our message out to the public, we utilize our Facebook pages, our community newsletters, and most importantly we deliver our message to the many service groups, organizations, and Home Owner Associations in Gem County.

Project Name	Description	Style	Begin Date	Agency
Educational Outreach	Retired Teachers Association	Meeting Presentation	Jan-2025	GCFD#1
Educational Outreach	REBA-Real Estate Brokers Association	Meeting Presentation	Jan-2025	1GEM
Educational Outreach	Harvest Valley HOA	Meeting Presentation	Jan-2025	EFD
Educational Outreach	Lilac Subdivision HOA	Meeting Presentation	Spring-2025	GCFD#1
Educational Outreach	Picket's Corral HOA	Meeting Presentation	Spring-2025	GCFD#1
Educational Outreach	Highland Hollows HOA	Meeting Presentation	Spring-2025	EFD
Educational Outreach	Twin Buttes HOA	Meeting Presentation	Spring-2025	EFD
Educational Outreach	4th Street Gardens	Door To Door	Spring-2025	EFD
Educational Outreach	Valor Health	LEPC-CISM Meetings	Spring-2025	EFD
Educational Outreach	Local Emergency Planning Committee (LEPC)	Meeting Updates	Nov 24 to Jan 29	1GEM, EFD, GCFD#1
Educational Outreach	Title Companies	Meeting Presentations	Jan-2025	1GEM
Educational Outreach	Emergency Preparedness Fair	Preparedness Fair	Mar-2025	GCFD#1

Response Planning

Code Enhancement

There are times when we have to be more forceful with our education. We have all agreed to enact our city and county wide open burn ban. Our Open burn ban is between July 1st to September 15th. We have found this successful program has reduced fire spread and also ember spread, keeping our county safer during the critical fire season.

Response and Support

Wildland fire response and support in the county is dependent on jurisdiction and location of starts or ongoing events. At the local level Gem County has two fire districts, Gem County Fire Protection District #1 and Gem County Fire Protection District #2 that are (full-time, mixed, volunteer). They house a number of fire apparatus that are primarily for structure response or protection, but have the capability to initial attack emerging events when dispatched to do such. Additionally, state (Idaho Department of Lands) and federal resources (BLM and USFS) have wildland response resources that are available from the local districts and can call upon additional resources when required to addresses events beyond the local organizational response capacity. All local resources are dispatched through Gem County 911 Dispatch, while state and federal are dispatched through the Southwest Idaho Interagency Dispatch. For availability of resources for fire response, daily run cards are used by both dispatches for mobilizing resources to wildfire events and they should be contacted if additional specific details about types and kinds of resources are needed.

Response Enhancements

We realize that municipal budgets are very constrained, so we have to make sure we find grants, or hold fund raisers to purchase some of the necessary equipment to keep current, and to continue to keep the community safe.

Project	Description	Priority	Completion Date	Agency	Cost
Tactical Tender Station 1	Truck	High Priority	2030	GCFD#1	\$360,000
Radios	Comms	High Priority	2026	GCFD#2	\$21,000
Portable Gas Monitors	Equipment	High Priority	2025	EFD	\$9,300
Radios	Comms	Medium Priority	2025	EFD	\$2,100
Type 3 Engine	Truck	Medium Priority	2027	EFD	\$600,000
Hose for Type 4 Engine	Equipment	High Priority	2025	EFD	\$3,000
PPE	Equipment	High Priority	2025	EFD	\$2,000
Wildland Division	Personnel	High Priority	2026	EFD	\$75,000
Communications	Equipment	High Priority	2025	GCFD#1	\$3,500
Water Pump and Hose	Equipment	Medium Priority	2027	GCFD#1	\$20,000
Wildland PPE	Equipment	High Priority	2026	GCFD#1	\$15,000

Successes of the Past

The open burn ban has been very successful in reducing the fire hazards during the critical fire season over the past few years. We have also been active in discussions with the communities in the Northern part of our county, and have held a community round table discussion about the WUI with the Forest Service, and GCFD#2, and other members from the community. We have also learned a great deal from attending the Wildfire Risk Mitigation Program Workshop produced by the Idaho Department of Lands. We have also been very successful in our planned burning along Highway 52 West of Emmett along the roadside, and near the High School along the roadside. After the Lava Fire, we worked with the Burn Area Emergency Recovery (BAER) Team. The USDA- Forest Service were able to contract with local loggers to remove debris and burned trees from the Burn scar in the Third Fork Area, reducing the fuels and making way for new growth.