Amanda Williams, NEPA Team Leader
Custer Gallatin National Forest
Hebgen Lake Ranger District
West Zone
P.O. Box 5220
West Yellowstone, Montana

Project 57353

Dear Amanda Williams:

I am here by submitting my comments on the SPLAT project in the Custer Gallatin National Forest. My comments submitted electronically will not contain graphs, photos, clips from many sources. I have tried to submit pictures, graphs ect through the electronic submission process and have not been successful, so my complete comments will be in a hard copy. This electronic submission is in an abbreviated form and my complete submission needs to be evaluated.

The need for the project is fuel management, road management and forest products. This is to be done through harvest to reduce the risk or extent of and increase the resiliency to insect and disease infestation while providing wood products to local mills. Also, reduce fuels to increase fire suppression effectiveness and safety.

The South Plateau Proposed Forest Resilience Timber Harvest and Fuels Reduction Treatments map,Figure 2, shows the extent of harvest and treatment, 19,630 acres that the forest service find suitable.

Another map, South Plateau Fuels Priority Area, figure 8 shows the WUI areas and the buffers. This map also shows the roads that are necessary to complete the South Plateau project.

This project is in the Greater Yellowstone Ecosystem, which is the best remaining functioning ecosystem in the lower 48. The GYE presently has all of the wildlife species that existed in pre-Columbian times, which is unique in the lower 48.

My comments will address the impact to wildlife, the ecosystem and the questions I have about the need for the project.

CGNF ignores the impact that climate change is demonstrably having on the GYE, foolishly dismissing the warnings and ignores research that points to the possibility of harvested trees not regenerating under increasing hot, dry conditions. Just today, 10/27, a Bozeman Chronicle story cited that the world is "well off track" to cutting emissions and that greenhouse gases reached a new record in 2021. We know that these gases are a huge factor in creating climate change. We know of the effects of climate change in the Greater Yellowstone Ecosystem in Montana, the hottest month of September and the first half of October ever, drought conditions impact the region. And yet, the forest service does not factor climate change into the project. The forest service does not factor in the emissions that will be created by the vegetation project. The forest service does not assess how much of the treatment will be waste and piled into huge machine created debris piles to be burned, creating more emissions. The forest service does not assess the amount of emissions from all of the motorized equipment involved in the harvesting, road building, moving the marketable timber to Deer Lodge or Livingston both 120 miles away.

We are in a period called the 6th extinction, with species declining in both diversity and numbers, yet the CGNF marches ahead with foolish grand projects like SPLAT.

SPLAT is a single species forest, lodge pole. The forest is a largely uniform forest in size and is unique as it occurs in volcanic soil which best supports lodge poles. This forest is explained on the Montana Natural Heritage site. **Lodge Pole Forests** Montana Field Guide (mt.gov) shows the lodge pole to be unique in this area of the state and that only lodge pole grows there because of the soil which is volcanic. The area was logged in the 1950's and 60's, which makes this forest 60-70 years old. Why harvest them now? The amount of energy and emissions created will far outpace the CO_2 that the forest can process. From a climate change perspective, this project does not make sense, more emissions will be created. This amount should be calculated.

Lodge Pole Forests are important to many species, both species of concern and threatened and endangered and should be left intact. In the hard copy of the same source listed above (1) I have listed native species commonly associated with this ecological system. There are many species of concern and listed species, and over 200 species that are commonly associated with the lodge pole forest. Two bird species are listed as on the brink of extinction by a Cornell Ornithology report. The ESA and Species of Concern should be better protected.

The map and species list are on paper copy **1**

Canada Lynx ESA listed

The map of Lynx habitat and movement is paper copy **2**

https://www.fws.gov/species/canada-lynx-lynx-canadensis?$skip=10 is the federal register announcement of a 5 year review, 7/2022

A 5-year status review considers all new information available at the time of the review. In conducting these reviews, we consider the best scientific and commercial data that have become available since the listing determination or most recent status review, such as:(A) Species biology, including but not limited to population trends, distribution, abundance, demographics, and genetics;(B) Habitat conditions, including but not limited to amount, distribution, and suitability;(C) Conservation measures that have been implemented that benefit the species;(D) Threat status and trends in relation to the five listing factors (as defined in section 4(a)(1) of the Act);

The Endangered Species Act (ESA). Section 7(a)(2) of the ESA requires federal agencies to consult with the Fish and Wildlife Service whenever a proposed action "may affect" listed species or destroy or adversely modify its critical habitat to ensure that the action is "not likely to jeopardize" these species. 16 U.S.C. § 1536.

Section 7 consultation must cover the overall effects of the entire project at the initial stage before the project can commence.

Section 7 prohibits federal agencies from taking actions that may result in the destruction or adverse modification" of critical habitat.

The 5 year review started in 2022 and this project should not proceed until the review has been completed.

Grizzly ESA listed

The statement below is documented in paper copy, listed as 3

The South Plateau is a high value habitat for the Grizzly. Grizzlies use the area and are commonly associated with the area and the lodge pole forest is used more than a harvested forest and the area is a connectivity route.

Grizzly Assumptions

1. The proposed project would change the distribution of ungulate prey or carrion in the project area, but the effect would not be significant at the scale at which bears operate because they would be able to adjust to changes in ungulate distribution **Data is needed**
2. The proposed project would result in the temporary reduction in the amount of available denning habitat or habitat quality, but effects are expected to be negligible**. How is a reduction of available denning habitat or habitat quality not a problem for the grizzly?**
3. The proposed project would adversely affect grizzly bears by temporarily reducing secure habitat. **How is reducing secure habitat not a problem?**
4. The proposed vegetation treatments would temporarily increase the total motorized access road. The negative effects of road and road **density on grizzlies is well known, how is this not a problem? To assume that** Grizzly bears would find secure areas away from project roads is not based on data. When the project maps are scrutinized I do not see **much secure habitat left**
5. Grizzly bears are likely to move to less disturbed areas in response to project sight and sounds and changes in habitat and forage availability**. When I look at the maps, there is not much area that is not disturbed.**

Grizzly_Bear_AMAJB01020_20190912.pdf (mtnhp.org) information is available here.

Wolverine Species of Concern

The statement below is documented in paper copy, listed as 4

Wolverine_AMAJF03010_20160914.pdf (mtnhp.org) a species of conservation concern that needs to be considered is the wolverine. Wolverines are in the South Plateau area, it is a suitable area and an area that they are commonly associated with, and they much prefer the lodge pole forest to a harvested forest-tree regeneration ecological system.

I have many questions and concerns about how this project does not follow the legal guidelines for endangered species, and necessary assessments. I also question that the latest science has been applied.

Endangered Species Act of 1973, as amended: Section 7(a)

(1) Supports biotic sustainability by requiring that "all... Federal agencies shall... utilize their authorities in furtherance of the purposes of this act by carrying out programs for the conservation of endangered species and threatened species."

2) The Endangered Species Act includes direction that Federal agencies, in consultation with the USFWS, will not authorize, fund, or conduct actions that are likely to jeopardize

the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitat. Endangered Species Act of 1973, administered by U.S. Fish and Wildlife Service: protect and recover imperiled species and the ecosystems upon which they depend. Record of Decision (2012 Planning Rule) detailed in 36 Code of Federal Regulations [CFR] 219.9 and the associated directives in

Endangered Species Act of 1973, as amended: Provides requirements for Federal agencies with regard to species listed as threatened or endangered, proposed for listing, or candidates for consideration under the act. Section 2 requires all Federal agencies to "seek to conserve endangered species and threatened species," and section 7 requires Federal agencies to ensure that the actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats

402.12 Biological assessments

- an analysis of the effects of the plan action on the species and habitat, including cumulative effects and the results of any related studies
- And a detailed discussion of the effects of the plan actions on the listed species
- If a formal consult is deemed necessary because the planned action will adversely affect a listed **species there is a protocol**

219.14 Decision document and planning records

- the documentation of how the best available scientific information was used to inform planning, the plan components and other plan content, including the plan monitoring program

219.9 Diversity of plant and animal communities

- An ecosystem plan is needed
- Diversity...maintain ...the ecological integrity of terrestrial ecosystem...maintain, structure, function, composition and connectivity

There are forest health/vegetation management projects that will negatively affect grizzly long term survivability and genetic integration with the Northern Continental ecosystem grizzly population. There are land designations that will negatively impact grizzlies; recreation emphasis and backcountry. These designations will cause habitat fragmentation

Habitat fragmentation caused from human use is an issue addressed in; **Wilderness, Wildlife, and Ecological Values of the Hyalite-Porcupine-Buffalo Horn Wilderness Study Area, Dr Lance Craighead.** He states;

- Most wildlife species, particularly those prized for hunting, viewing, and photographing, are sensitive to human-caused disturbance and habitat alteration.
- The amount of disturbance to wildlife caused by trail users is greatest from all-terrain vehicles according to most existing studies
- Disturbance due to human activities reduces the amount of habitat available for use by wildlife, increases stress, and depletes energy reserves, thus reducing the carrying capacity of the habitat: the best habitat for wildlife is found in areas with the least human disturbance.
- To ensure that wildlife have sufficient habitat for population persistence into the future, and to confer resilience in the face of climate change and land use change, there must be an adequate amount of protected habitat available among the spectrum of lands that are accessible to those wildlife.
- The more permanent that protected habitat is, and the larger the area is, the more certainty there is that wildlife populations can persist.
- **219.10 Multiple Uses**
- Plan must provide for ecosystem services and multiple uses recreation, timber, wildlife
- **I think that timber, being one of the multiple uses is identified as a use that positively affects the forest vegetation and that a reduction of hazardous or fuels contributes to forest health. The reduction of hazardous fuels does not have a strong basis in scientific fire research.**
- **The forest service needs to look at the science of logging to create healthy forests and ask; does logging reduce hazardous fuels? This should be looked at through the lens of climate change and the best available science. The cgnf needs to clarify what conditions are driving forest fires. The forest service should promote helping landowners fire proof their residences that are in or near forest service lands, not removing vegetation in the cgnf.**
- The forest service elevates the importance of the timber industry in the local economy. Looking at the economic impacts of timber in Gallatin, Park and Madison counties the impact is small.
- **Gallatin County**-industries percentage of private employment; timber.2%, mining.4%, agriculture 1.6%, travel and tourism 25.0%

The industry that has the highest percentage of private employment in all three counties is tourism. A UM poll tallied the top three activities that Montanans participate in: **Hiking and trail running 67%Camping 66% Bird watching Wildlife watching 49%. The UM also does polling on nonresident tourism**

and the results are similar. Resident and nonresident activities require intact ecosystems

219.3 Role of science in planning

Shall use the best available scientific information to inform the planning process

- Fire policies need to be rewritten and based on the latest available fire science that includes the roles of climate change, wildland urban interface program effectiveness.
- Sustainable stand replacement regeneration is a phrase that is used but I don't see a monitoring program that provides data for example on soil moisture necessary for regeneration, US Drought monitoring data on locations

Mitigation

Reevaluate the role and management of fire on federal lands and base it on the huge amount of science that has been released lately. The Wildland Urban Interface program needs to be eliminated as it is now implemented and rewritten to use the latest science, climate change, landowner responsibilities and a monitoring plan for forest health

219.8 Sustainability

- A plan developed...must provide for ecological sustainability.
- Ecosystem integrity...standards or guideline to maintain or restore the ecological integrity of terrestrial ecosystems ...in the plan area, including...connectivity taking into account
- contribution of the plan area to ecological condition within the broader landscape influenced by the plan area
- conditions in the broader landscape that may influence the sustainability of resources
- system drivers...climate change, disturbance regimes

There are forest health/vegetation management projects that will negatively affect grizzly long term survivability and genetic integration with the Northern Continental ecosystem grizzly population, the cgnf plan does not provide ecological integrity for the Gallatin/Bridger area of the GYE. The plan divides up the Gallatin Range, carving up the WSA and creating an island ecosystem. The land designations that will negatively impact grizzlies; recreation emphasis and backcountry. These designations will cause habitat fragmentation because of increased human use as described in the land use classification. The island in the Gallatin Range will not allow connectivity especially as wildlife are faced with system drivers like climate change and disturbances like timber/vegetation projects and wildfires

It is the responsibility of the forest plan to provide for wildlife connectivity.

The South Plateau project does not provide protected corridors that focus on habitat connectivity.

fseprd595911.pdf

Ecological connectivity within and around Custer Gallatin National Forest: An analysis to inform forest planning

A forest service map shows the linkage along the Continental Divide paper copy 5

Climate Change reflected in weather patterns paper copy 6

Weather Patterns of 2020-2022 are hotter, and drier and reflect what Greater Yellowstone climate scientists predict

Climate Change Science

Greater Yellowstone area expected to become warmer, drier

New report highlights climate change effects on greater Yellowstone ecosystem

June 23, 2021
US Geological Survey
Temperature significantly increased and snowfall decreased in the iconic Greater Yellowstone Area since 1950 because of climate change, and these trends will likely continue through the rest of the century, according to a new climate report.

GYCA_June2021_FullReport-1.pdf

GREATER YELLOWSTONE CLIMATE ASSESSMENT Past, Present, and Future Climate Change in Greater Yellowstone Watersheds

Temperature significantly increased and snowfall decreased in the iconic Greater Yellowstone Area since 1950 because of climate change, and these trends will likely continue through the rest of the century, according to a climate report published today (https://www.gyclimate.org/).

Greater Yellowstone Climate Assessment ("the Assessment") presents an in-depth summary of past, historical, and projected future changes to temperature, precipitation, and water in the GYE.

Climate Change and Ecological Health in the South Plateau/Greater Yellowstone Ecosystem

How healthy is Greater Yellowstone Ecosystem today and what is its prognosis looking ahead? The South Plateau is an important part of the GYE. The eastern border is Yellowstone National Park, its south and west border is the Continental Divide.

Looking at the South Plateau area makes me think that the Forest Service is at risk of misrepresenting the viability of its intended management for resilience, ecological integrity, and an assumed position that desired future conditions will be like current and past conditions. The projections are for hotter and drier patterns.

These affects will impact wildlife. Especially ESA listed threatened wildlife and the habitats that they require to be sustainable for the long term.

, **Yellowstone, Wildland Health Index; Ecosphere, August 2018; Dr. Andy Hansen and Linda Phillips Montana State University**. It focused on 35 key "vital signs" ranging from snowpack and rivers (water) to forests, fire, wildlife and aquatic species such as fish.

The report determined that the "Greater Yellowstone's ecological health is challenged by growing use by people and changing climate. This report said:

- "...changes in land use and climate have reduced snowpack and stream flows, increased stream temperatures, favored pest outbreaks and forest die-off, fragmented habitat types, expanded invasive species, and reduced native fish populations,"
-

Proceedings of the National Academy of Science, March 11, 2018 **Wildfires and climate change push low-elevation forests across a critical climate threshold for tree regeneration** Kimberley T. Davis eta. This is a study on climate change. That report drew the following conclusions.

- Species that require snow will be especially impacted: "Projections for the coming century suggest more precipitation as rain rather than snow, which will have substantial impacts to snowpack across the GYE. The net balance of the projected increases in temperature and precipitation results in a 36 percent reduction of the average total annual snowpack during 2070–2099 relative to 1970–1999."
- The greater GYE will have higher temperatures for longer periods and will have a 36% reduction in annual snowpack
- Climate change will also change vegetation. With hotter drier weather patterns there will be more fire. The aftermath of the fires could lead to vegetative changes

Climate Change vulnerability and adaptation in the Northern Rocky Mountains ; Holofsky eta.reports on a breath of issues that will likely affect the Rocky Mountains;

- decreasing snowpack
- declining summer flows and the effects on fishery flows, recreation, habitat ect
- increased air temperatures and gradual changes in the abundance and distribution of tree, shrub and grass species
- wildfires
- The report states that little direct data exists on the direct effects of climate variability changes on: **wildlife species** and what is known on those species. A focus on wildlife that will be affected like the Canada Lynx, fisher, grizzly and wolverine and their prey species. All aspects that affect their best long term survivability need to be studied.

2017 MONTANA CLIMATE ASSESSMENT Bozeman and Missoula MT: Montana State University and University of Montana, Montana Institute on Ecosystems made the following projections;

Average temperature Since 1950, average statewide temperatures have increased by 0.5°F/decade (0.3°C/decade), with greatest warming in spring; projected to increase by 3-7°F (1.7-3.9°C) by mid century, with greatest warming in summer and winter and in the southeast.

Present and Future Climate Change in the Rocky Mountains
www.rockymountainclimate.org/reports_6.htm September 2014 Union of Concerned Scientists and Rocky Mountain Climate Organization Temperatures have risen more in the Rocky Mountain region than in the nation as a whole over the past 20 years.

Montana State University

07/23/2021 BOZEMAN — A climate report for the Greater Yellowstone Area co-authored by Montana State University Regents Professor Emerita Cathy Whitlock has been gaining traction around the world since it was published June 23. The Greater Yellowstone Climate Assessment, a collaborative effort between MSU, the U.S. Geological Survey and the University of Wyoming, is a comprehensive look at climate change in the area using data from 1950 to 2018.

Since 1950, the report states, average temperatures in the Greater Yellowstone Area have gone up 2.3 degrees Fahrenheit and snowfall has decreased by 25%. If the trend continues, that

average temperature could rise another 10 degrees by the end of the century and drastically change the landscape. Whitlock, a paleoecologist who has spent more than four decades studying environmental change, has been on the faculty of the Department of Earth Sciences in the College of Letters and Science at MSU since 2004

"We are now moving into a climate that seems even warmer and drier than those periods," Whitlock says in the article. "That's crazy. It's possible that this whole geyser basin and the plumbing is going to change." Geysers aren't the only thing at risk as temperatures rise

"As trees die off due to the hotter climate, forests may shrink in the coming decades, which will have a cascading effect: less forest and fewer tree roots mean more grass and more erosion," the article states. "Drier grass means fewer nutrients for large mammals. Less water also hurts everything from migratory and aquatic species to grazers like bison, who face decreased nutrients from dry plants." The article ends with a plea and a bit of hope from Whitlock, who is noted for devoting much of her career to sharing the changes she sees in her research with the public in hopes of fueling positive change. "What we do in the next decade is critical," she says to conclude the article. "We have new technologies, we can solve this. We just need the will to do it."

WUI paper copy page 7

WUI designated areas are excessive. The forest service says that high value resources that have been mapped with a .5 mile buffer include roads, high value recreation areas, communication sites, power lines, municipal watersheds. The maps above show the WUI map with the ½ mile buffers, aerial photos, building that need protection through WUI treatments and the communication tower and power line corridor.

1. Aerial photos and other mapping show that buildlings are right next to highway 191 and should not require a ½ mile buffer. Instead the homeowners should make their homes fire safe.
2. Aerial photos also show the power line has had vegetation removal. The section lines in the photo show a road under the power line that is cleared for access. An addition ½ mile on either side is not necessary.
3. Whiskey Springs is just south of West Yellowstone and does not appear to need vegetation treatment. An intact forest is best for continued water purity.
4. The communication tower on the continental divide is made of metal and does not require a ½ mile buffer.

Distance to WUI | Distance to WUI | Montana Forest Action Plan

Relative distance of a location from the Wildland-Urban Interface boundary, from the State plan.

The Wildland-Urban Interface (WUI) comprises areas within an "at-risk community" or adjacent to a community within a distance of 1 1/2 miles. Communities at risk consist of a group of homes and other structures with basic infrastructure and services within or adjacent to federal land. These communities are areas where conditions are conducive to a large scale wildland fire disturbance event, thereby posing a significant threat to human life or property.
In this service, locations within the State of Montana are classified according to their distance from the Wildland-Urban Interface (WUI) and the structures within it.

Distance in miles from WUI and structures; white 0, purple1, bright green 2, red 3, blue 4, dark green 5. It appears that most of the WUI areas that are identified do not qualify when the contour of the map is followed.

Defensible-space treatment of < 114,000 ha 40 m from high-risk buildings near wildland vegetation could reduce loss in WUI wildfire disasters across Colorado's 27 million ha. High risk of building loss is rarely a federal land-management problem. If the goal is rapid reduction of building loss in WUI wildfire disasters, focus resources on defensible space 20–40 m from WUI buildings within 100 m of wildland vegetation.

On October 14 and 15 2022 I went to the South Plateau to assess the need for the treatment projects. I drove my 4 wheeler 65 miles to assess the condition of the area. I saw no dwarf mistletoe and no pine beetle outbreaks. I took many photos and will share them with you for evaluation. To do this project to increase landscape resilience and reduce a beetle outbreak is needless.

Here are some conclusions from the latest fire research; **Wildfire Experts' Paper Informs Effective Policy, April 2017 Headwaters Economics**

1. Fire size and frequency will increase under a warmer and drier climate

2. Fuel reduction on federal lands will do little to reduce acreage burned and homes lost

3. Not all forests need restoration

4. High severity fires often have ecological benefits

5. Insect outbreaks do not necessarily make fires worse

6. Land-use planning can reduce wildfire risk

Protocols and Procedures that have not been adequately addressed

Paper copy page 8

The South Plateau project fails to address

402.12 Biological assessments

- an analysis of the effects of the project action on the species and habitat, including cumulative effects and the results of any related studies
- And a detailed discussion of the effects of the project actions on the listed species
- If a formal consult is deemed necessary because the planned action will adversely affect a listed **species there is a protocol**

219.14 Decision document and planning records

- the documentation of how the best available scientific information was used to inform project planning, the project components and other project content, including the project monitoring program

219.9 Diversity of plant and animal communities

- An ecosystem plan is needed
- Diversity...maintain ...the ecological integrity of terrestrial ecosystem...maintain, structure, function, composition and connectivity
- The South Plateau project is a forest health/vegetation management projects that will negatively affect grizzly long term survivability and genetic integration with the Northern Continental ecosystem grizzly population. The land designation that the forest service has designated for the South Plateau area will negatively impact grizzlies; recreation emphasis

South Plateau gets "vegetation treatments" and then it becomes a recreation emphasis area. How can the project/plan not have a huge affect on the ESA listed species and other wildlife species that are Species of Concern that I have listed.

219.10 Multiple Use

habitat conditions for wildlife

I disagree that timber, being one of the multiple uses, is identified as a use that positively affects the forest vegetation and that a reduction of hazardous or fuels contributes to forest health. The reduction of hazardous fuels does not have a strong basis in scientific fire research.

The forest service needs to look at the science of logging to create healthy forests and ask; does logging reduce hazardous fuels? This should be looked at through the lens of climate change and the best available science. The cgnf needs to clarify what conditions are driving forest fires. The forest service should promote helping landowners fire proof their residences that are in or near forest service lands, not removing vegetation in the cgnf.

My hope is that the forest service will revisit the South Plateau project. A frame of reference for you should be; how was this area managed under the prior forest plan? A 1996 forest service map shows much of the area managed for wildlife security and winter range. Wildlife need these classification now, more than ever.

Nancy Schultz, Board member of Gallatin Wildlife
420 N. 10th Ave
Bozeman, MT 59715

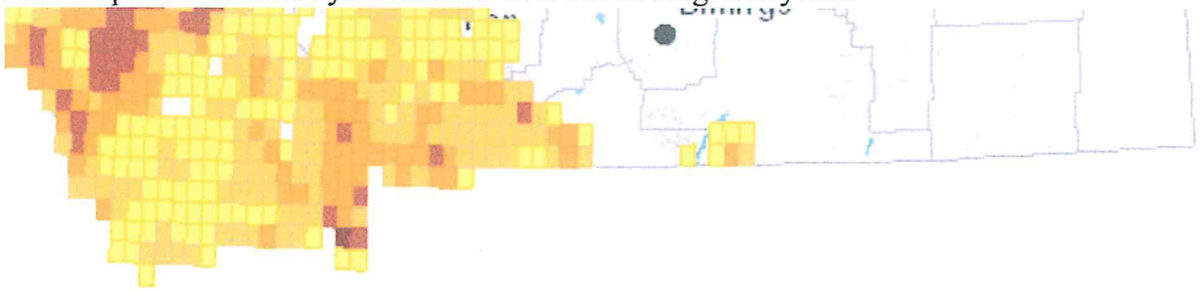
1.

Lodge Pole Forests

[Montana Field Guide (mt.gov)]

Lodge Pole Forests are important to many species, both species of concern and threatened and endangered and should be left intact.

Native Species Commonly Associated with this Ecological System



Native Species Commonly Associated with this Ecological System

Mammals

Preble's Shrew *(Sorex preblei)* SOC
Little Brown Myotis *(Myotis lucifugus)* SOC
Fringed Myotis *(Myotis thysanodes)* SOC
Hoary Bat *(Lasiurus cinereus)* SOC
Grizzly Bear *(Ursus arctos)* SOC
Wolverine *(Gulo gulo)* SOC
Silver-haired Bat *(Lasionycteris noctivagans)* PSOC
North American Porcupine *(Erethizon dorsatum)* PSOC
Vagrant Shrew *(Sorex vagrans)*
Dusky or Montane Shrew *(Sorex obscurus)*
Western Small-footed Myotis *(Myotis ciliolabrum)*
Mountain Cottontail *(Sylvilagus nuttallii)*
Least Chipmunk *(Tamias minimus)*
Red-tailed Chipmunk *(Tamias ruficaudus)*
Columbian Ground Squirrel *(Urocitellus columbianus)*
Red Squirrel *(Tamiasciurus hudsonicus)*
Northern Pocket Gopher *(Thomomys talpoides)*
Bushy-tailed Woodrat *(Neotoma cinerea)*
Western Heather Vole *(Phenacomys intermedius)*
Montane Vole *(Microtus montanus)*
Western Jumping Mouse *(Zapus princeps)*
Gray Wolf *(Canis lupus)*
American Black Bear *(Ursus americanus)*
Marten *(Martes americana)*
Least Weasel *(Mustela nivalis)*
Striped Skunk *(Mephitis mephitis)*
Mountain Lion *(Puma concolor)*
Mule Deer *(Odocoileus hemionus)*
Moose *(Alces alces)*
Western Pygmy Shrew *(Sorex eximius)* SOC
Long-eared Myotis *(Myotis evotis)* SOC
Long-legged Myotis *(Myotis volans)* SOC
Townsend's Big-eared Bat *(Corynorhinus townsendii)* SOC
Fisher *(Pekania pennanti)* SOC
Canada Lynx *(Lynx canadensis)* SOC
North American Water Vole *(Microtus richardsoni)* PSOC
Masked Shrew *(Sorex cinereus)*
Western Water Shrew *(Sorex navigator)*
California Myotis *(Myotis californicus)*
Big Brown Bat *(Eptesicus fuscus)*
Snowshoe Hare *(Lepus americanus)*
Yellow-pine Chipmunk *(Tamias amoenus)*
Yellow-bellied Marmot *(Marmota flaviventris)*
Golden-mantled Ground Squirrel *(Callospermophilus lateralis)*
Northern Flying Squirrel *(Glaucomys sabrinus)*
Deer Mouse *(Peromyscus maniculatus)*
Southern Red-backed Vole *(Myodes gapperi)*
Meadow Vole *(Microtus pennsylvanicus)*
Long-tailed Vole *(Microtus longicaudus)*
Coyote *(Canis latrans)*
Red Fox *(Vulpes vulpes)*
Raccoon *(Procyon lotor)*
Short-tailed Weasel *(Mustela erminea)*
Long-tailed Weasel *(Mustela frenata)*
Bobcat *(Lynx rufus)*
Elk *(Cervus canadensis)*
White-tailed Deer *(Odocoileus virginianus)*
Mountain Goat *(Oreamnos americanus)*

Birds

Northern Goshawk *(Accipiter gentilis)* SOC
Northern Hawk Owl *(Surnia ulula)* SOC
Black-backed Woodpecker *(Picoides arcticus)* SOC
Clark's Nutcracker *(Nucifraga columbiana)* SOC
Brown Creeper *(Certhia americana)* SOC
Varied Thrush *(Ixoreus naevius)* SOC
Evening Grosbeak *(Coccothraustes vespertinus)* SOC
Broad-tailed Hummingbird *(Selasphorus platycercus)* PSOC
Sharp-shinned Hawk *(Accipiter striatus)*
Red-tailed Hawk *(Buteo jamaicensis)*
Spruce Grouse *(Canachites canadensis)*
Ruffed Grouse *(Bonasa umbellus)*
Northern Pygmy-Owl *(Glaucidium gnoma)*
Northern Saw-whet Owl *(Aegolius acadicus)*
Vaux's Swift *(Chaetura vauxi)*
Williamson's Sapsucker *(Sphyrapicus thyroideus)*
Downy Woodpecker *(Dryobates pubescens)*
American Three-toed Woodpecker *(Picoides dorsalis)*
Olive-sided Flycatcher *(Contopus cooperi)*
Hammond's Flycatcher *(Empidonax hammondii)*
Cordilleran Flycatcher *(Empidonax occidentalis)*
Violet-green Swallow *(Tachycineta thalassina)*
Steller's Jay *(Cyanocitta stelleri)*
Black-billed Magpie *(Pica hudsonia)*
American Crow *(Corvus brachyrhynchos)*
Mountain Chickadee *(Poecile gambeli)*
Red-breasted Nuthatch *(Sitta canadensis)*
Pygmy Nuthatch *(Sitta pygmaea)*
Ruby-crowned Kinglet *(Corthylio calendula)*
Townsend's Solitaire *(Myadestes townsendi)*
Hermit Thrush *(Catharus guttatus)*

Flammulated Owl *(Psiloscops flammeolus)* SOC
Great Gray Owl *(Strix nebulosa)* SOC
Pileated Woodpecker *(Dryocopus pileatus)* SOC
Boreal Chickadee *(Poecile hudsonicus)* SOC
Pacific Wren *(Troglodytes pacificus)* SOC
Cassin's Finch *(Haemorhous cassinii)* SOC
Boreal Owl *(Aegolius funereus)* PSOC
Rufous Hummingbird *(Selasphorus rufus)* PSOC
Cooper's Hawk *(Accipiter cooperii)*
Rough-legged Hawk *(Buteo lagopus)*
Dusky Grouse *(Dendragapus obscurus)*
Great Horned Owl *(Bubo virginianus)*
Barred Owl *(Strix varia)*
Common Nighthawk *(Chordeiles minor)*
Calliope Hummingbird *(Selasphorus calliope)*
Red-naped Sapsucker *(Sphyrapicus nuchalis)*
Hairy Woodpecker *(Dryobates villosus)*
Northern Flicker *(Colaptes auratus)*
Western Wood-Pewee *(Contopus sordidulus)*
Dusky Flycatcher *(Empidonax oberholseri)*
Tree Swallow *(Tachycineta bicolor)*
Canada Jay *(Perisoreus canadensis)*
Blue Jay *(Cyanocitta cristata)*
Common Raven *(Corvus corax)*
Black-capped Chickadee *(Poecile atricapillus)*
Chestnut-backed Chickadee *(Poecile rufescens)*
White-breasted Nuthatch *(Sitta carolinensis)*
Golden-crowned Kinglet *(Regulus satrapa)*
Mountain Bluebird *(Sialia currucoides)*
Swainson's Thrush *(Catharus ustulatus)*
American Robin *(Turdus migratorius)*

Ruby-crowned Kinglet *(Corthylio calendula)*
Townsend's Solitaire *(Myadestes townsendi)*
Hermit Thrush *(Catharus guttatus)*
Mountain Bluebird *(Sialia currucoides)*
Swainson's Thrush *(Catharus ustulatus)*
American Robin *(Turdus migratorius)*
Bohemian Waxwing *(Bombycilla garrulus)*
Cassin's Vireo *(Vireo cassinii)*
Yellow-rumped Warbler *(Setophaga coronata)*
Wilson's Warbler *(Cardellina pusilla)*
Rose-breasted Grosbeak *(Pheucticus ludovicianus)*
American Tree Sparrow *(Spizelloides arborea)*
Fox Sparrow *(Passerella iliaca)*
White-throated Sparrow *(Zonotrichia albicollis)*
Dark-eyed Junco *(Junco hyemalis)*
Rusty Blackbird *(Euphagus carolinus)*
Purple Finch *(Haemorhous purpureus)*
Red Crossbill *(Loxia curvirostra)*
Pine Siskin *(Spinus pinus)*

Warbling Vireo *(Vireo gilvus)*
Orange-crowned Warbler *(Leiothlypis celata)*
Townsend's Warbler *(Setophaga townsendi)*
Western Tanager *(Piranga ludoviciana)*
Indigo Bunting *(Passerina cyanea)*
Chipping Sparrow *(Spizella passerina)*
Lincoln's Sparrow *(Melospiza lincolnii)*
White-crowned Sparrow *(Zonotrichia leucophrys)*
Lapland Longspur *(Calcarius lapponicus)*
Pine Grosbeak *(Pinicola enucleator)*
White-winged Crossbill *(Loxia leucoptera)*
Common Redpoll *(Acanthis flammea)*

Reptiles

Northern Rubber Boa *(Charina bottae)*
Terrestrial Gartersnake *(Thamnophis elegans)*

Amphibians

Western Toad *(Anaxyrus boreas)* SOC
Long-toed Salamander *(Ambystoma macrodactylum)*

Invertebrates

Gillette's Checkerspot *(Euphydryas gillettii)* SOC
Gray Comma *(Polygonia progne)* SOC

Vascular Plants

Greenleaf Manzanita *(Arctostaphylos patula)* SOC
Pale Corydalis *(Corydalis sempervirens)* SOC
Coville Indian Paintbrush *(Castilleja covilleana)* SOC
Cascade reedgrass *(Calamagrostis tweedyi)* SOC
Velvetleaf Huckleberry *(Vaccinium myrtilloides)* SOC
Yerba Buena *(Satureja douglasii)* SOC
Lemhi Beardtongue *(Penstemon lemhiensis)* SOC

Canada Lynx paper copy 2
https://www.fws.gov/species/canada-lynx-lynx-canadensis?$skip=10
USFWS Canada Lynx

https://www.federalregister.gov/d/2022-16772

Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status Reviews of Five Listed Species in the Mountain-Prairie Region

A Notice by the Fish and Wildlife Service on 08/05/2022

Under the Act (16 U.S.C. 1531 *et seq.*), we maintain Lists of Endangered and Threatened Wildlife and Plants (which we collectively refer to as the List) in the Code of Federal Regulations (CFR) at 50 CFR 17.11 (for animals) and 17.12 (for plants). Section 4(c)(2)(A) of the Act requires us to review each listed species' status at least once every 5 years. Our regulations at 50 CFR 424.21 require that we publish a notice in the **Federal Register** announcing those species under active review.

What information do we consider in our review?

A 5-year status review considers all new information available at the time of the review. In conducting these reviews, we consider the best scientific and commercial data that have become available since the listing determination or most recent status review, such as:

(A) Species biology, including but not limited to population trends, distribution, abundance, demographics, and genetics;

(B) Habitat conditions, including but not limited to amount, distribution, and suitability;

(C) Conservation measures that have been implemented that benefit the species;

(D) Threat status and trends in relation to the five listing factors (as defined in section 4(a)(1) of the Act); and

(E) Other new information, data, or corrections, including but not limited to taxonomic or nomenclatural changes, identification of erroneous information contained in the List, and improved analytical methods.

Any new information will be considered during the 5-year status review and will also be useful in evaluating the ongoing recovery programs for the species.

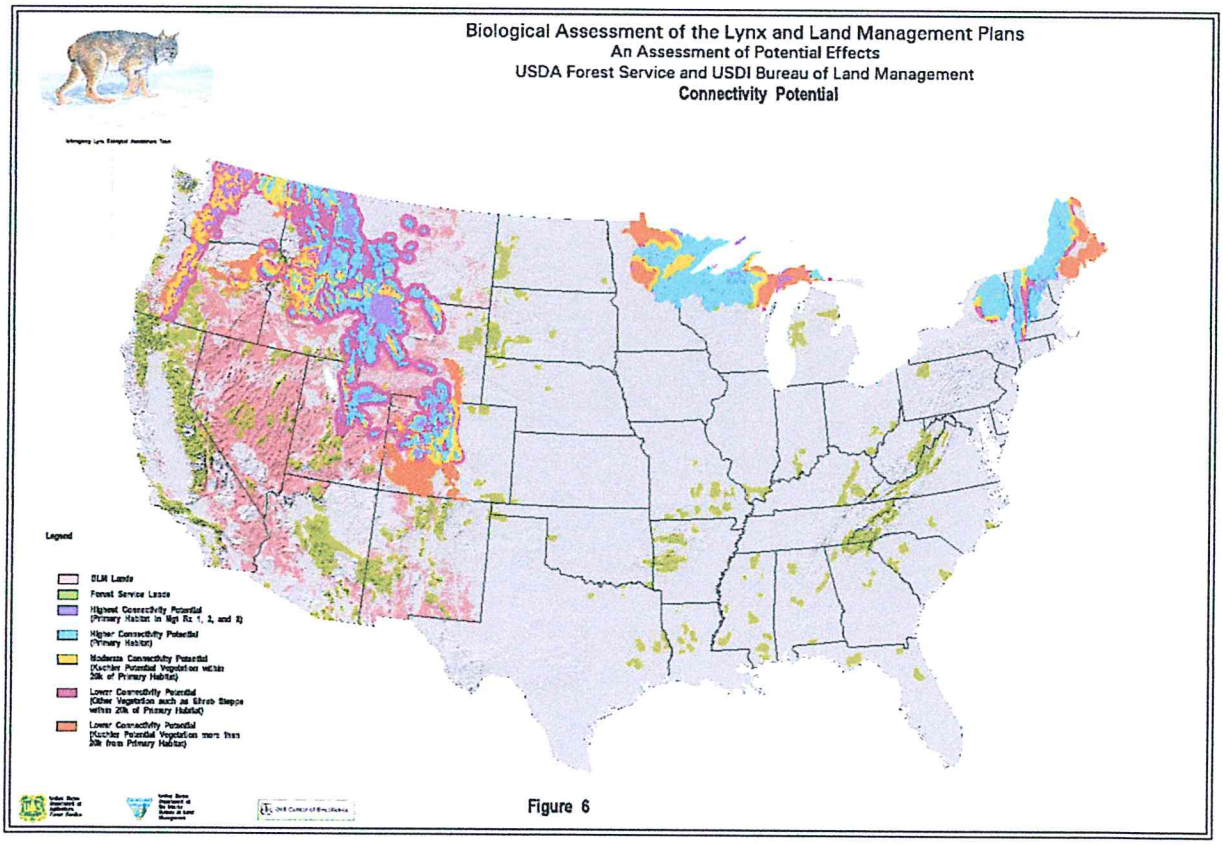
Canada lynx	*Lynx canadensis*	Threatened	Maine, New Hampshire, Minnesota, Montana, Wyoming, Idaho, Washington, Colorado	68 FR 40076; 7/3/2003

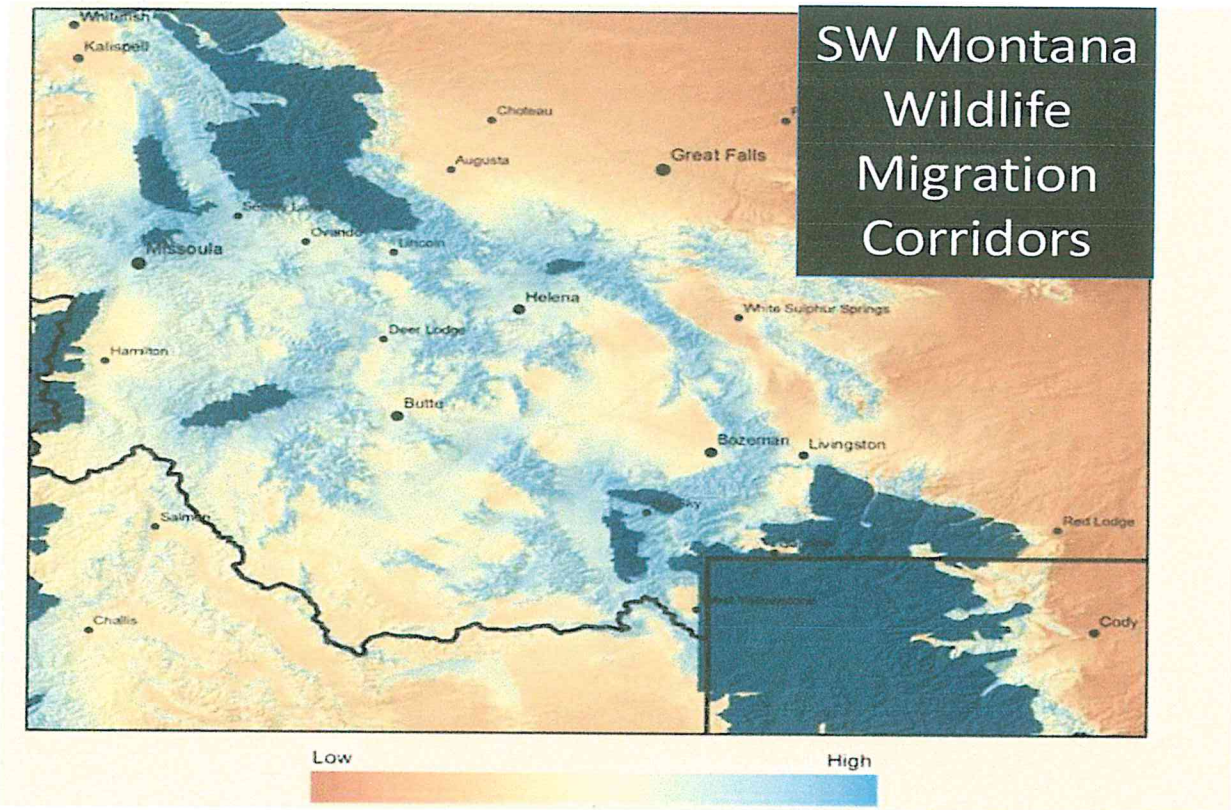
We do know what the forest service wants to do and it has only been evaluated with and EA. Under the Endangered Species Act (ESA). Section 7(a)(2) of the ESA requires federal agencies to consult with the Fish and Wildlife Service and/or National Marine Fisheries Service whenever a proposed action "may affect" listed species or destroy or adversely modify its critical habitat to ensure that the action is "not likely to jeopardize" these species. 16 U.S.C. § 1536.

section 7 consultation must cover the overall effects of the entire project at the initial stage before the project can commence.

Section 7 prohibits federal agencies from taking actions that may result in the destruction or adverse modification" of critical habitat. In Center for Native Ecosystems v. Cables, the court held that critical habitat is adversely modified by any actions "that adversely affect a species" recovery and the ultimate goal of delisting

.





The South Plateau project should not move forward while the 5 year USFWS review is being conducted.

The South Plateau is a high value habitat for the Grizzly, Grizzlies use the area and are commonly associated with the area and the lodgepole forest is used more than a harvested forest and the area is a connectivity route. Important!!!

Grizzly_Bear_AMAJB01020_20190912.pdf (mtnhp.org) **Paper copy 3**

Figure 3. Continuous habitat suitability model output (logistic scale).

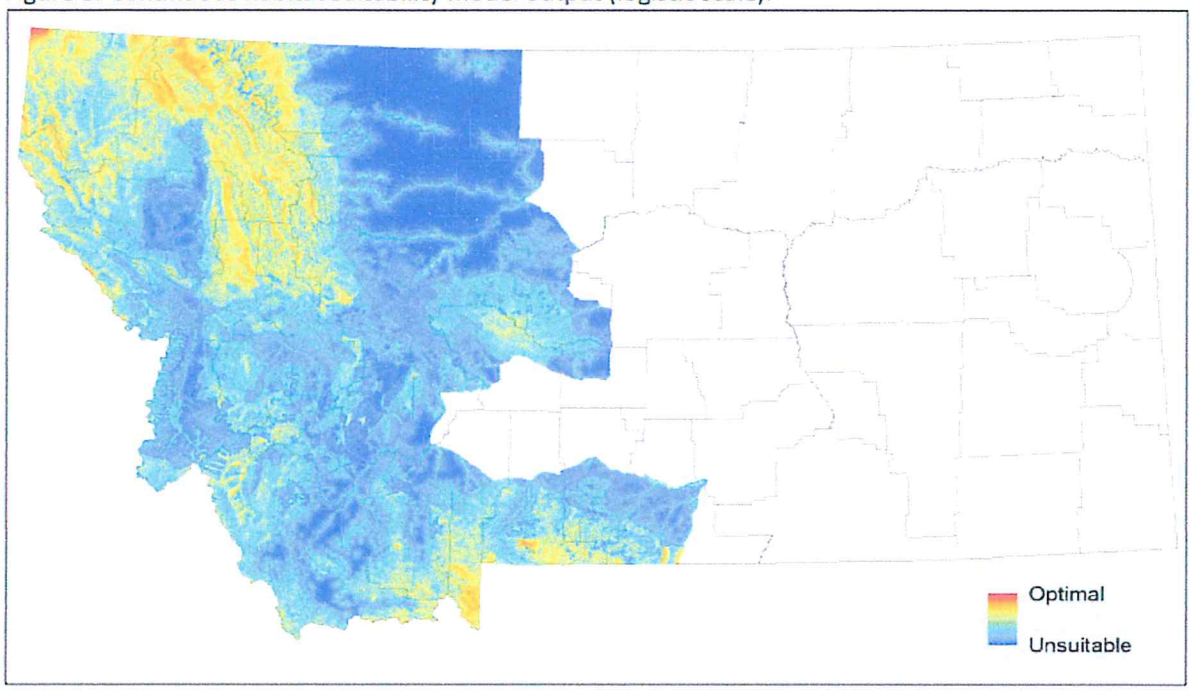
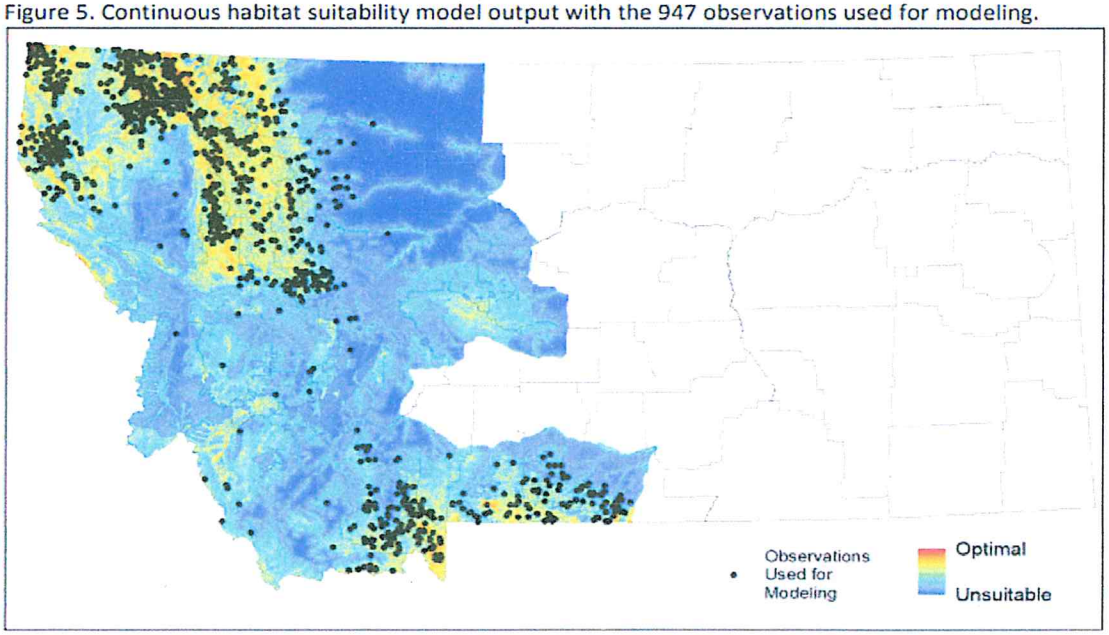


Figure 5. Continuous habitat suitability model output with the 947 observations used for modeling.



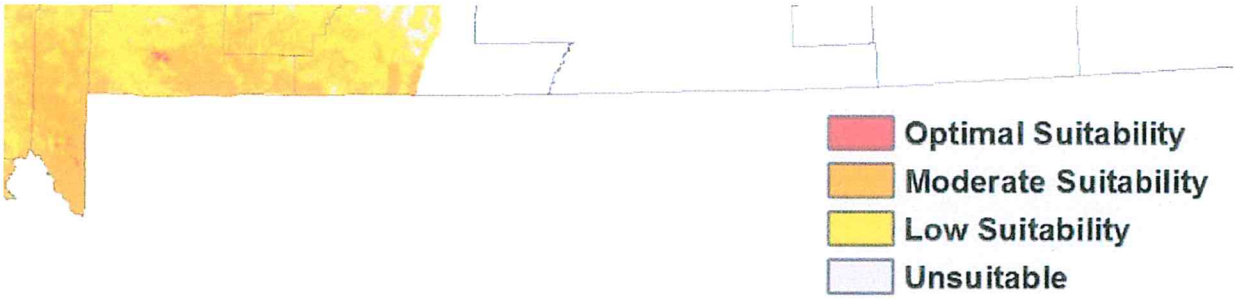
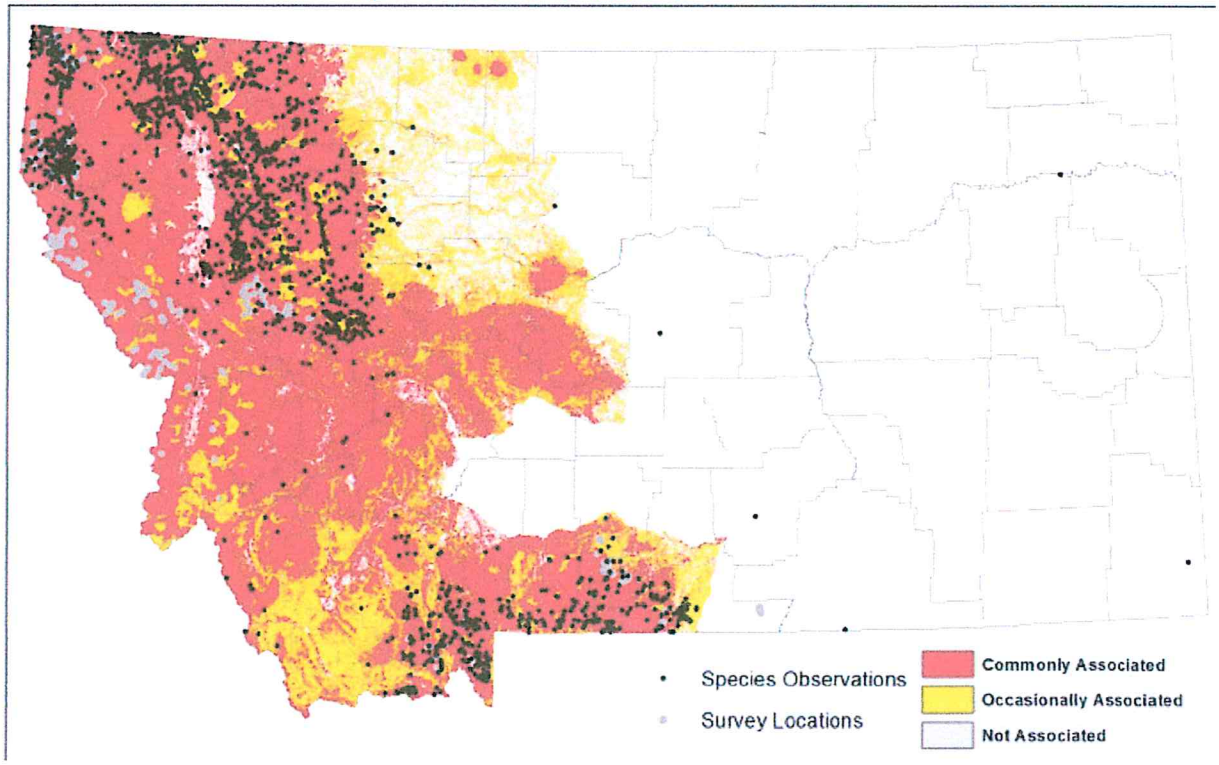


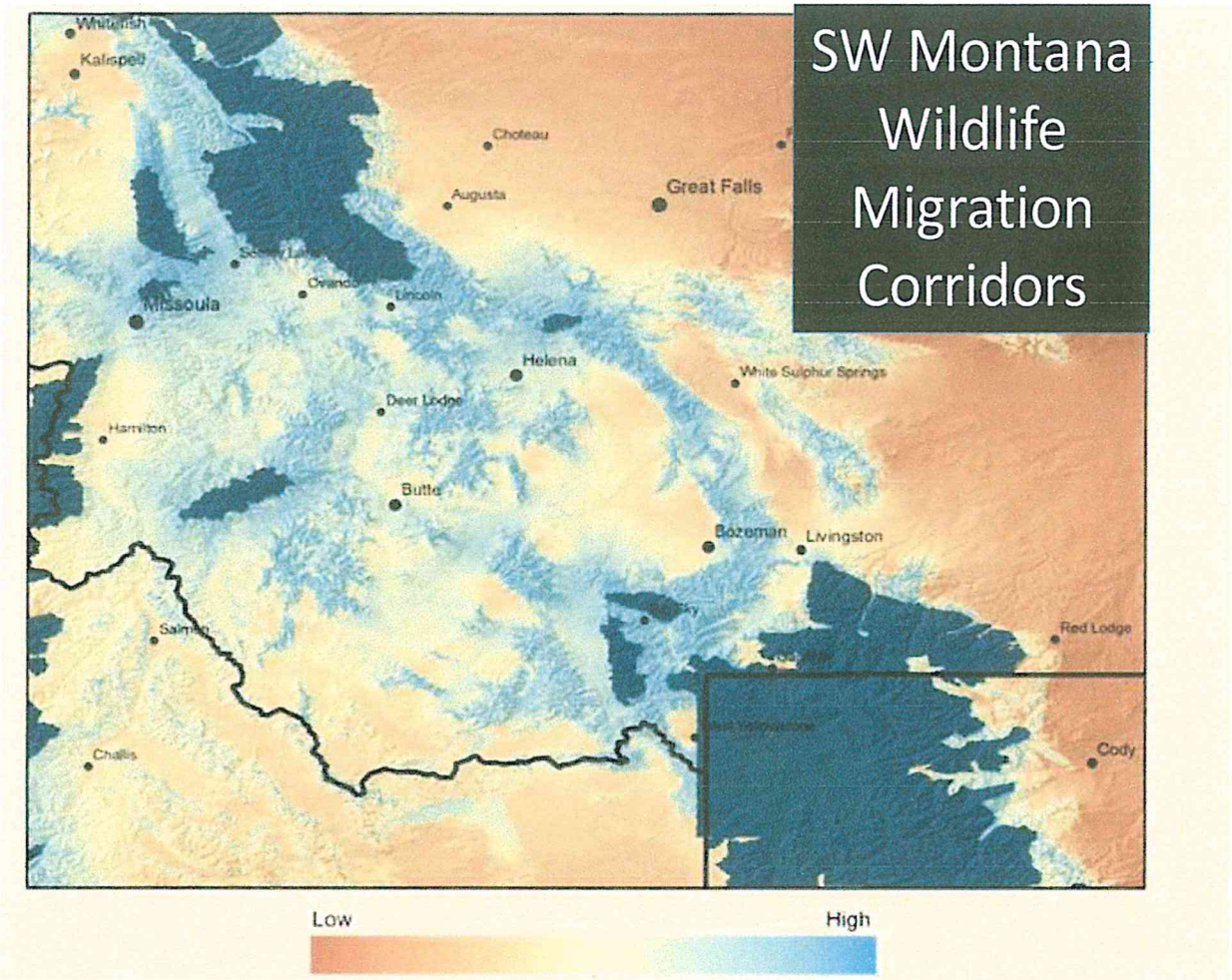
Table 6: Ecological Systems Associated with Grizzly Bear

Ecological System	Code	Association	Count[a]
Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest	4232	Common	124
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	4242	Common	102
Rocky Mountain Mesic Montane Mixed Conifer Forest	4234	Common	72
Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland	4243	Common	60
Rocky Mountain Lodgepole Pine Forest	4237	Common	57
Harvested forest-grass regeneration	8603	Occasional	10

Deductive Model Map Output

Figure 10. Deductive model output classified into habitat associations.




SW Montana Wildlife Migration Corridors
Whitefish
Kalispell
Choteau
Augusta
Great Falls
Missoula
Lincoln
Helena
White Sulphur Springs
Deer Lodge
Hamilton
Butte
Bozeman
Livingston
Red Lodge
Challis
Cody
Low
High

Wolverine_AMAJF03010_20160914.pdf (mtnhp.org) **Paper copy 4**

a species of conservation concern that needs to be considered is the wolverine. Wolverines are in the South Plateau area, it is a suitable area and an area that they are commonly associated with, and they much prefer the lodge pole forest to a harvested forest-tree regeneration ecological system.

Figure 3. Continuous habitat suitability model output (logistic scale).

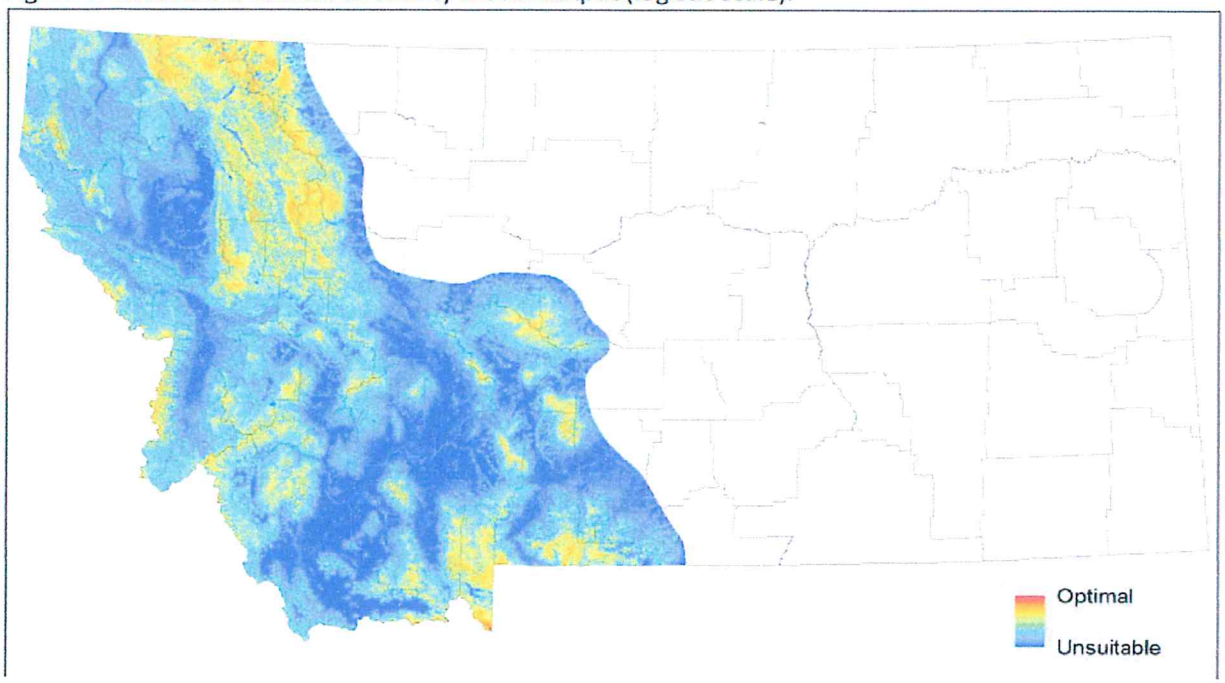
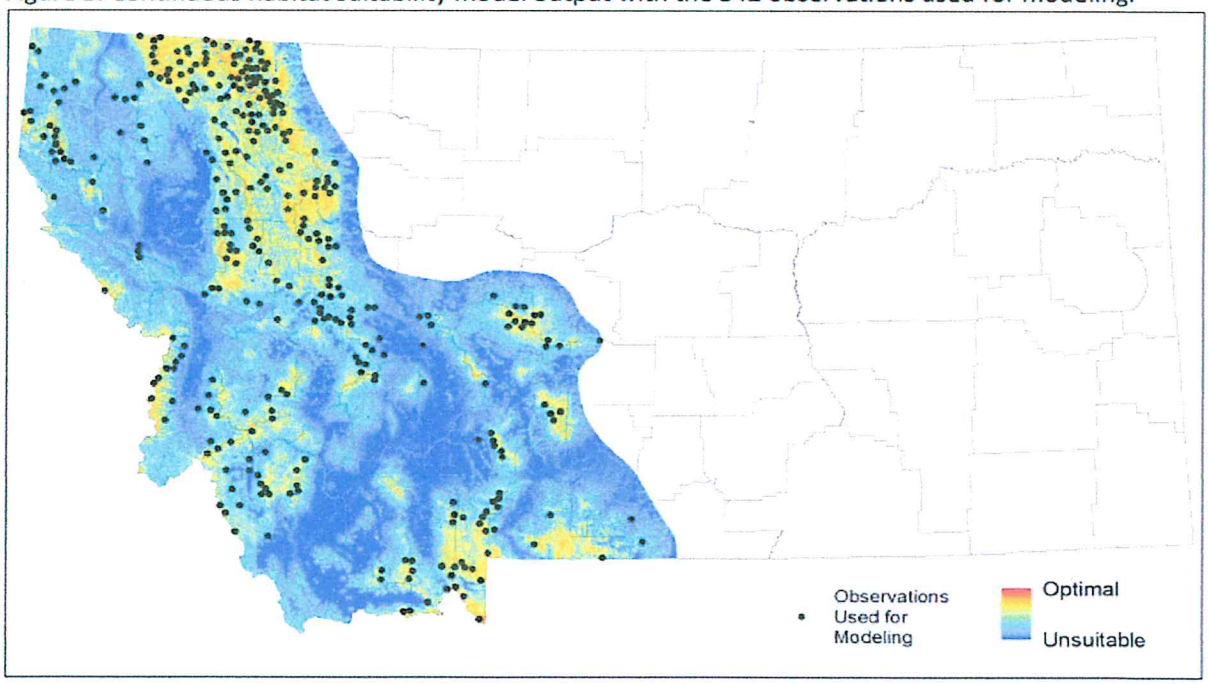


Figure 5. Continuous habitat suitability model output with the 342 observations used for modeling.



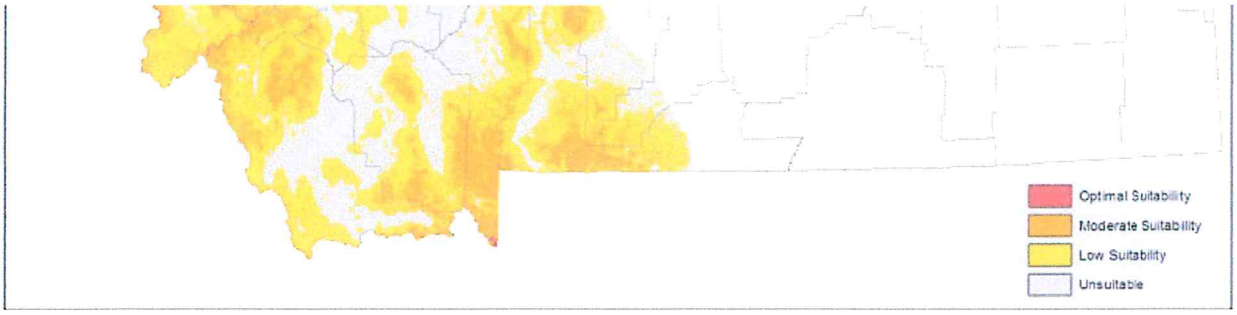
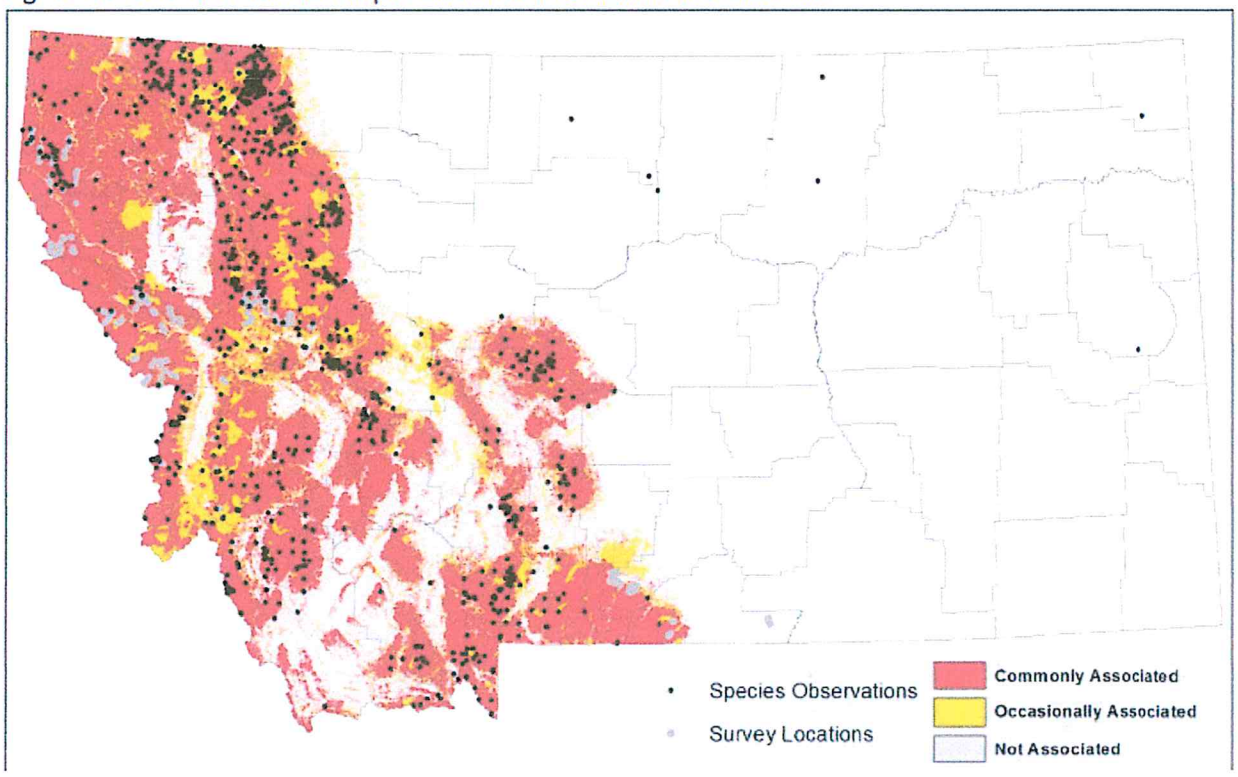
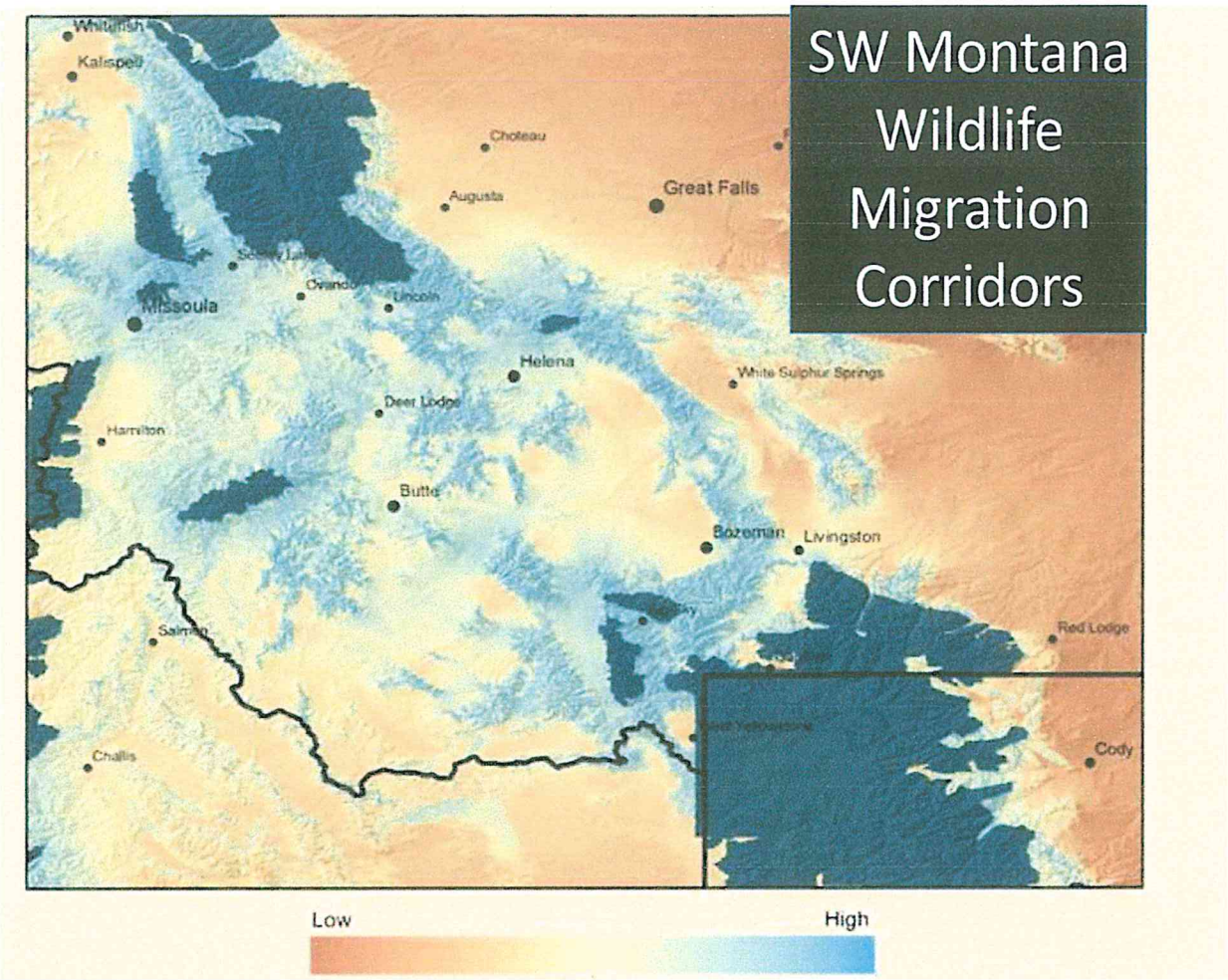


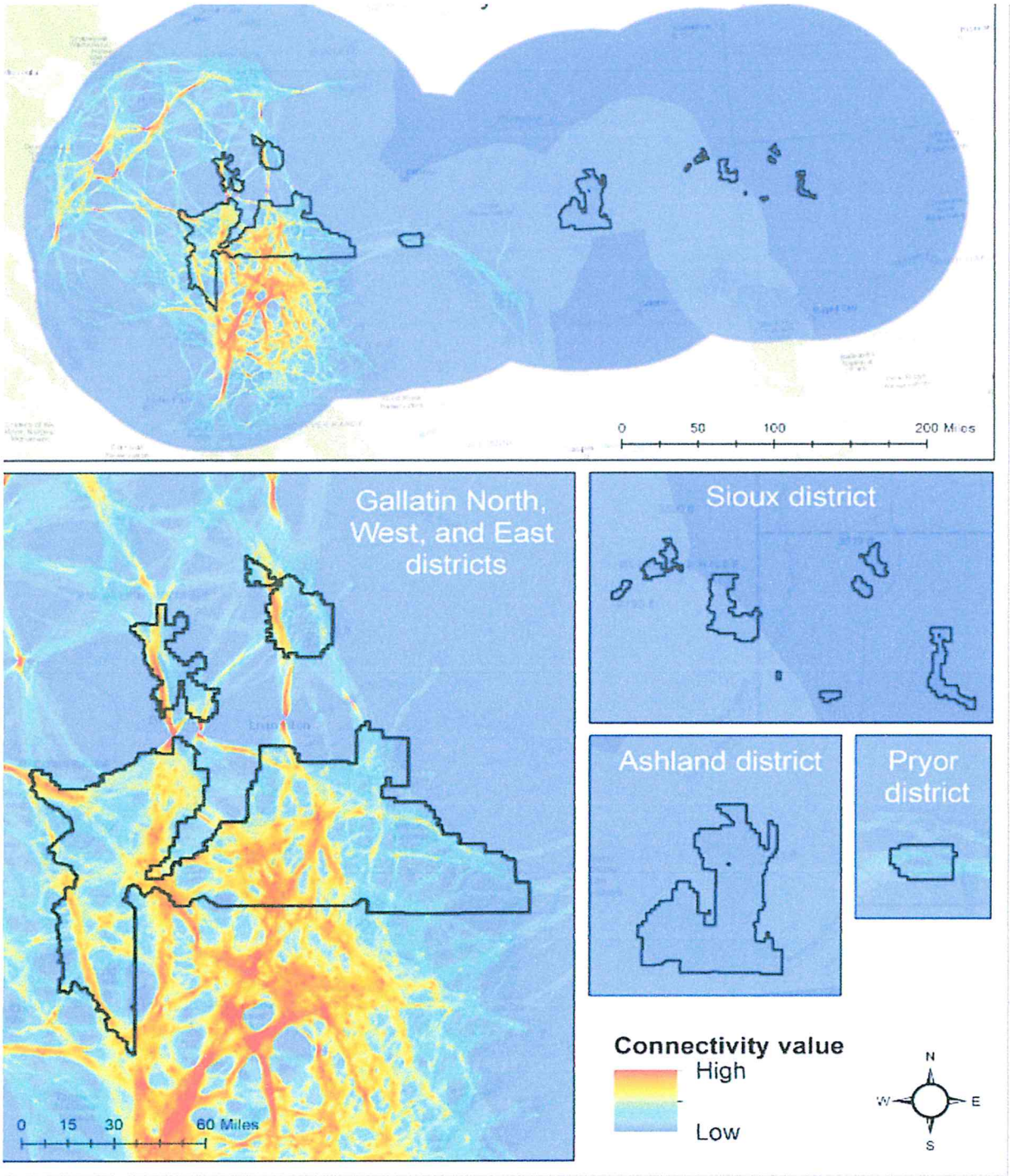
Table 6: Ecological Systems Associated with Wolverine

Ecological System	Code	Association	Count[a]
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	4242	Common	52
Rocky Mountain Lodgepole Pine Forest	4237	Common	32
Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest	4232	Common	27
Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland	4243	Common	22
Aspen Forest and Woodland	4164	Occasional	4
Harvested forest-tree regeneration	8601	Occasional	4
Rocky Mountain Ponderosa Pine Woodland and Savanna	4240	Occasional	3
Aspen and Mixed Conifer Forest	4302	Occasional	3
Rocky Mountain Lower Montane-Foothill Riparian Woodland and	9156	Occasional	1

Figure 10. Deductive model output classified into habitat associations.




SW Montana Wildlife Migration Corridors
Whitefish
Kalispell
Choteau
Augusta
Great Falls
Missoula
Helena
White Sulphur Springs
Deer Lodge
Hamilton
Butte
Bozeman
Livingston
Red Lodge
Cody
Challis
Low
High



gure 9. Results of connectivity analysis for the "large forest specialist" generic species, assuming ar-optimal movement behavior. Results are shown for the full study extent (top panel) and in

Paper copy page 5

fseprd595911.pdf **Ecological connectivity within and around Custer Gallatin National Forest: An analysis to inform forest planning**

Paper copy page 6

Greater Yellowstone area expected to become warmer, drier

New report highlights climate change effects on greater Yellowstone ecosystem

June 23, 2021
US Geological Survey
Temperature significantly increased and snowfall decreased in the iconic Greater Yellowstone Area since 1950 because of climate change, and these trends will likely continue through the rest of the century, according to a new climate report.

GYCA_June2021_FullReport-1.pdf

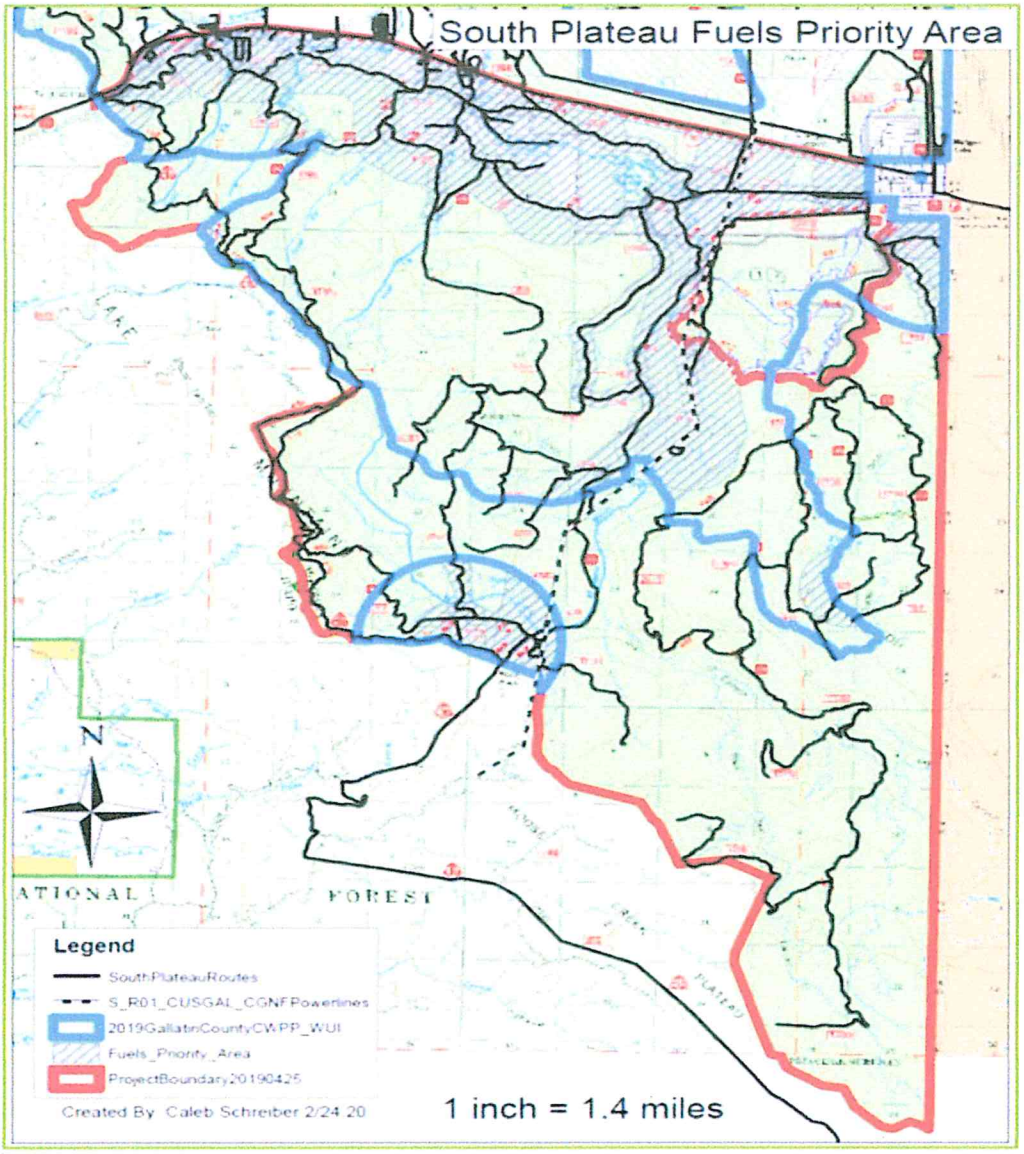
GREATER YELLOWSTONE CLIMATE ASSESSMENT Past, Present, and Future Climate Change in Greater Yellowstone Watersheds

Temperature significantly increased and snowfall decreased in the iconic Greater Yellowstone Area since 1950 because of climate change, and these trends will likely continue through the rest of the century, according to a climate report published today (https://www.gyclimate.org/).

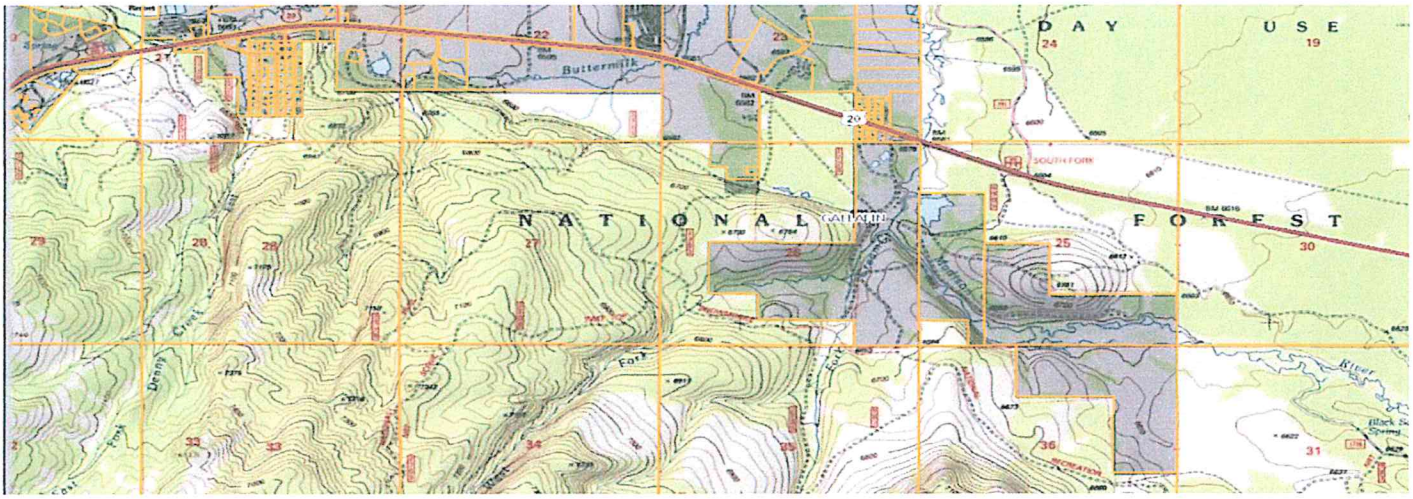
Greater Yellowstone Climate Assessment ("the Assessment") presents an in-depth summary of past, historical, and projected future changes to temperature, precipitation, and water in the GYA

HUC6 Watershed	Change between 1950-2018				Trends to 2100 compared to 1986-2005 (based on MACAv2_METDATA[1] for RCP4.5)				
	Temperature	Snowfall		Peak stream flow	Temperature	Precip-itation	Snowpack[2]	Jun - Aug runoff	Growing season length[3]
GYA	2.3°F warmer	23 inches less	25% loss	8 days earlier	5.3°F warmer	9% increase	40% loss	35% less	--
Upper Yellowstone	2.0°F warmer	1.3 inches more	1% gain	12 days earlier	5.2°F warmer	9% increase	44% loss	36% less	35 days longer
Big Horn	0.89°F warmer	7.3 inches less	14% loss	1 day earlier	5.3°F warmer	9% increase	38% loss	32% less	40 days longer
Upper Green	3.0°F warmer	32 inches less	44% loss	4 days earlier	5.4°F warmer	10% increase	38% loss	33% less	40 days longer
Snake Headwaters	1.1°F warmer	16 inches less	11% loss	15 days earlier	5.5°F warmer	9% increase	39% loss	38% less	29 days longer
Upper Snake	2.3°F warmer	33 inches less	32% loss	12 days later	5.4°F warmer	8% increase	41% loss	39% less	32 days longer
Missouri Headwaters	2.6°F warmer	4.1 inches more	4% gain	9 days earlier	5.3°F warmer	9% increase	43% loss	36% less	28 days longer

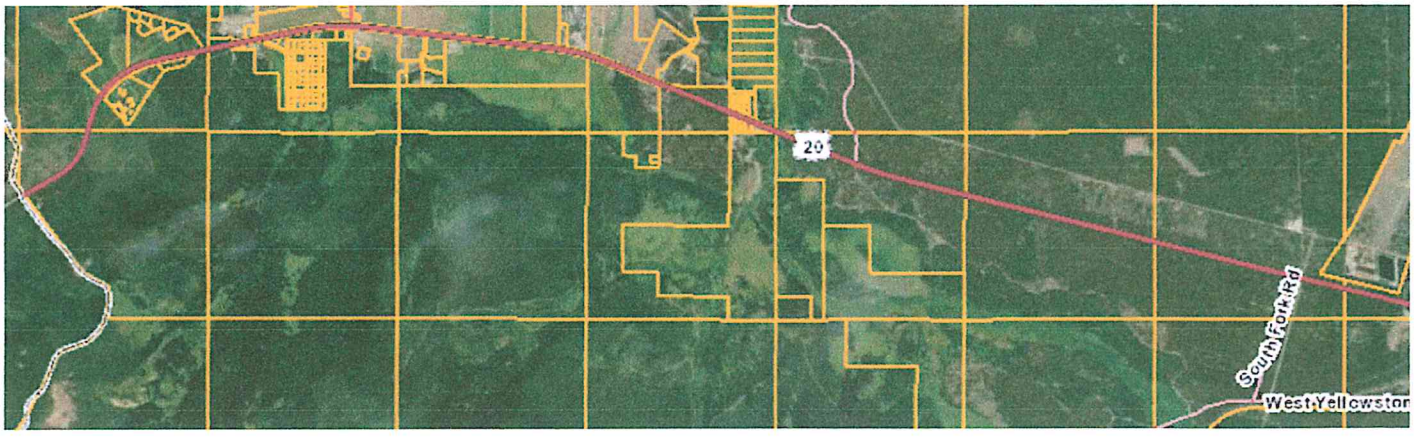
Paper copy page 7

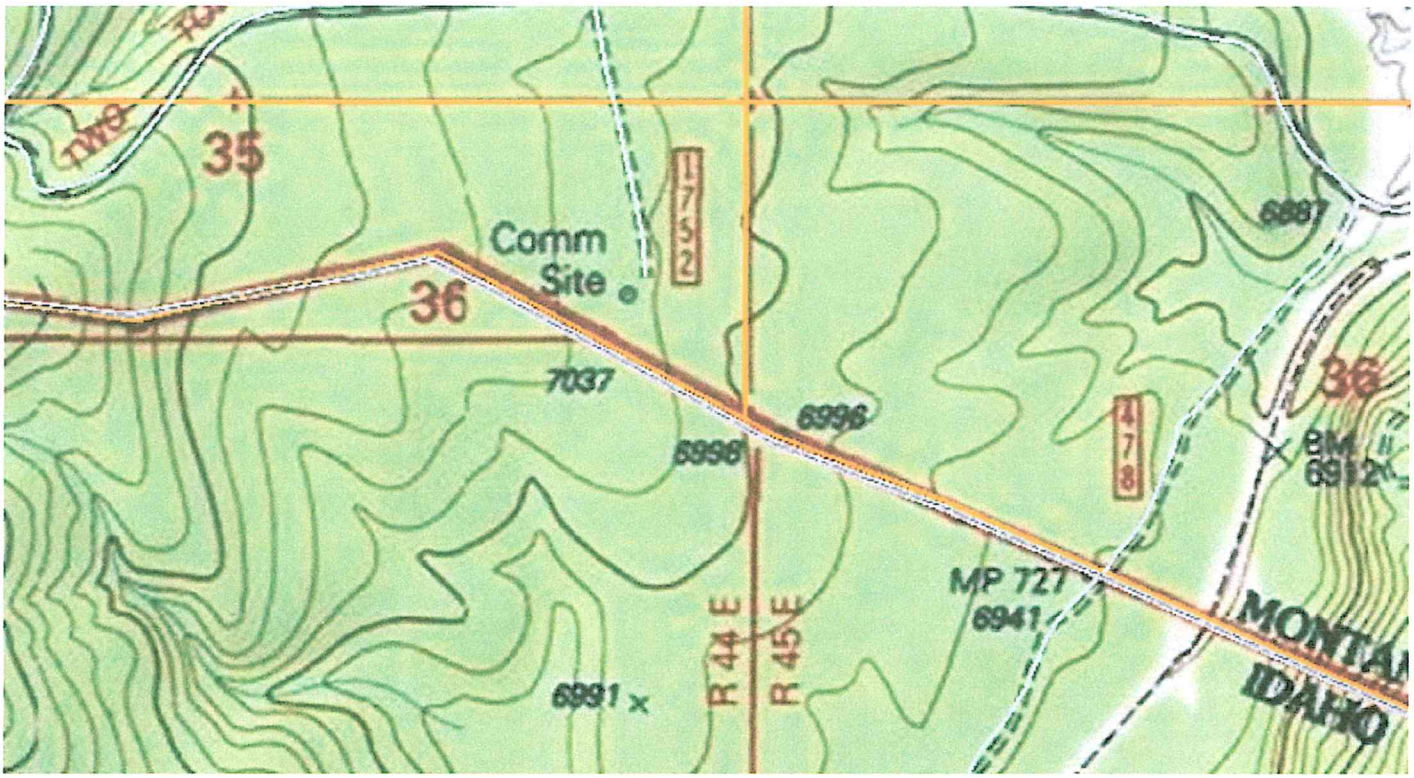


'igure 8. Map of the Gallatin County Community Wildfire Protection Plan defined Wildland Urban nterface and fuels priority areas in the South Plateau Project area.


DAY USE
NATIONAL FOREST
Buttermilk
Denny Creek
20


20
30
30
29
28
27
26
25
30
29
32
33
34
35
36
31
32
South Fork Madison River
South Fork Rd
West Yellowstone


20
South Fork Rd
West Yellowstone



Non-WUI Uninhabited = Areas with structure density = 0. These are areas with burnable fuels and no development.

Additional high-value resources and assets that were included in the WUI mapping include the following:

1. Designated travel/egress routes with a 0.5-mile buffer on either side.
2. Other areas designated as "at-risk" (USFS-CGNF) including FS buildings, high-value recreation areas and communication sites. These assets were buffered in the same manner as the structure address points.
3. Municipal watersheds, including Bozeman, Lyman Springs and Whiskey Springs (West Yellowstone).

High value resources that have been mapped with a .5 mile buffer include roads, high value recreation areas, communication sites, power lines, municipal watersheds. The maps above show the WUI map with the ½ mile buffers, aerial photos, building that need protection through WUI treatments and the communication tower and power line corridor.

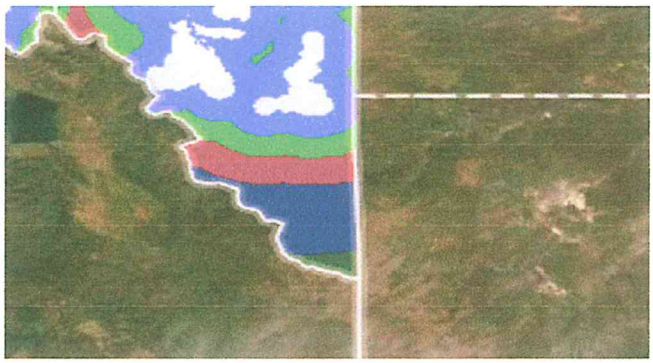
1. Aerial photos and other mapping show that buildlings are right next to highway 191 and should not require a ½ mile buffer. Instead the homeowners should make their homes fire safe.
2. Aerial photos also show the power line has had vegetation removal. The section lines in the photo show a road under the power line that is cleared for access. An addition ½ mile on either side is not necessary.
3. Whiskey Springs is just south of West Yellowstone and does not appear to need vegetation treatment. An intact forest is best for continued water purity.
4. The communication tower on the continental divide is made of metal and does not require a ½ mile buffer.

Distance to WUI | Distance to WUI | Montana Forest Action Plan

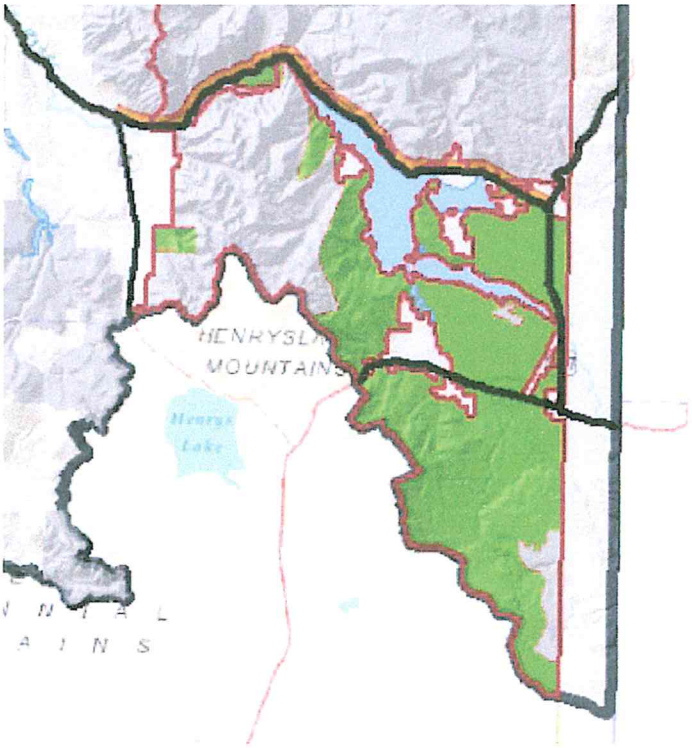
Relative distance of a location from the Wildland-Urban Interface boundary, from the State plan.

The Wildland-Urban Interface (WUI) comprises areas within an "at-risk community" or adjacent to a community within a distance of 1 1/2 miles. Communities at risk consist of a group of homes and other structures with basic infrastructure and services within or adjacent to federal land. These communities are areas where conditions are conducive to a large scale wildland fire disturbance event, thereby posing a significant threat to human life or property.
In this service, locations within the State of Montana are classified according to their distance from the Wildland-Urban Interface (WUI) and the structures within it.

Distance in miles from WUI and structures; white 0, purple1, bright green 2, red 3, blue 4, dark green 5. It appears that most of the WUI areas that are identified do not qualify when the contour of the map is followed.



I feel that the Gallatin County WUI map, figure 8, is not following the state plan, and should not go forward as mapped.



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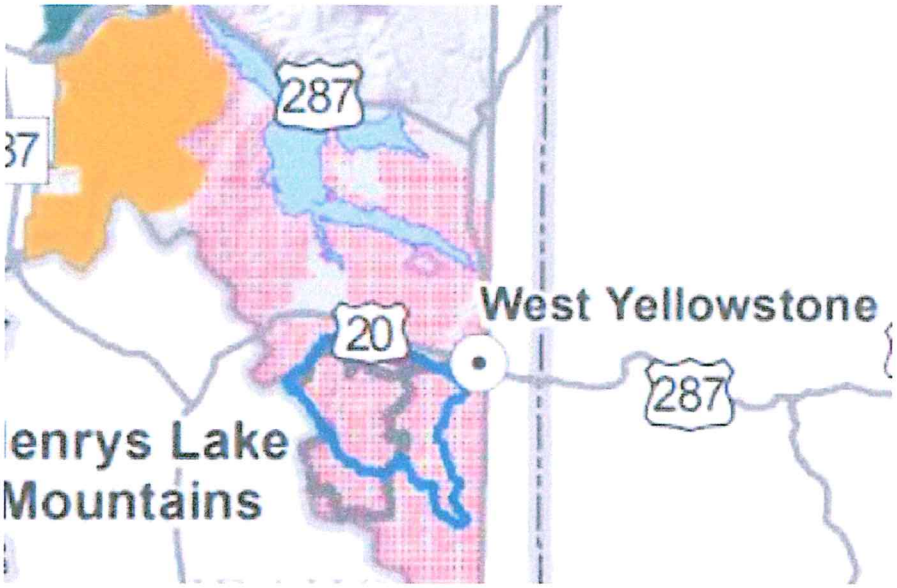

Recreation Emphasis Area (Pink Areas)

These areas typically offer a variety of quality recreation opportunities, including motorized and nonmotorized uses. The recreation opportunities are accessible to a wide range of users, in several seasons, and typically offer challenges to a wide range of skills. The areas may be regional , national, or international destinations, or may be close to higher population center. Recreation Emphasis Areas close to population centers may offer opportunities for trail connections to communities or may have a high density of human activities and associated structures. There may be roads, utilities, and trails as well as sign of past and ongoing activities of managed forest vegetation. Opportunities for solitude and a primitive experience may be limited near roads or trails due to frequent contact with other users.