Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Caribou-Targhee National Forest | August 2021

# Caribou Prescribed Fire Restoration Project

## Environmental Assessment and Finding of No Significant Impact

# ENVIRONMENTAL ASSESSMENT

## PROJECT INFORMATION

**Project Name:** Caribou Prescribed Fire Restoration Project

**Project Initiation Date:** 10/28/2020

**Proponent Name:** Caribou-Targhee National Forest

**Signing Authority:** Mel Bolling, Forest Supervisor

**District:** Soda Springs Ranger District, Montpelier Ranger District, Westside Ranger District

**County(ies):** Bannock, Bear Lake, Caribou and Franklin Counties in Idaho

**Anticipated Implementation:** 2022

**PALS Tracking #:** 59025

**Project Webpage Link**: https://www.fs.usda.gov/project/?project=59025

**Project Contact:** Dylan Johnson, dylan.johnson@usda.gov, (208) 313-7839

## Purpose and Need and Proposed Action

### Current Condition and Trends

In a natural fire regime, wildfire and historical burning of varying intensities thinned vegetation and limited fuel loading. However, throughout the 20th century, human activities, such as fire suppression and livestock grazing, altered this natural fire regime. Without regular wildfire, vegetation composition and structure has been altered and fuel loading has increased. This, in turn, has caused an increase in the magnitude in size and intensity of wildfire during hot, dry years. Reduced winter precipitation, earlier spring snowmelt, and longer dry seasons have also played a role in this shift. Risks to communities and natural resources are expanding and the environment is growing increasingly more dangerous for firefighters.

As the scale of wildfire grows, the scale of management actions to anticipate and mitigate fire effects must expand accordingly and efforts must be coordinated at a scale large enough to make a difference. Implementing management actions, such as prescribed fire, to increase the amount of mixed-severity burning is consistent with the natural fire regime in these fire-adapted ecosystems. It can help increase the resiliency of these ecosystems to withstand future wildfire or other stressors. Long term, prescribed burning could reduce the number of large, high-severity wildfires that could occur on the landscape. There is a need to develop a long-term strategy to identify and conduct prescribed fire in vegetation communities most in need of restoration. Within the Caribou Prescribed Fire Restoration project management will focus on treatment for the following themes: aspen restoration; conifer or woodland encroachment into non-forested vegetation types; structural diversity of both forested and non-forested types; and fuels reduction.

### Need for Proposal

There is a need to take actions to improve the health and resiliency of vegetation communities and habitats in these fire-dependent ecosystems to meet the following purposes:

- Reduce the risk of uncharacteristic wildfire to key ecosystem components by modifying and reducing natural fuel accumulation.

- Increase resiliency of existing vegetation groups to future stressors like wildfire and drought by improving plant vigor, stand structure, and species composition.
- Improve the proper ecological function of vegetative communities.

Additionally, restoration of fire-dependent ecosystems would also help to manage fuel loading to allow for suppression strategies to protect values at risk and improve firefighter and public safety in the event of a wildfire.

LANDFIRE datasets were used to evaluate vegetation condition class data and to identify major departures from the natural (pre-settlement or historical) fire regime (LANDFIRE 2014, National Interagency Fuels Fire and Technology Transfer System 2010). Based on this analysis, we found that there are over 223,535 acres in the Caribou Prescribed Fire Restoration Project Area that can be characterized as being moderately or highly departed from their natural regime of vegetation characteristics; and fire frequency. LANDFIRE data were also used to compare historic range mean fire return interval as well as approximate acres burned for each vegetation type (LANDFIRE 2014).

This information provides an approximation of how many acres should be targeted for burning on an annual basis to restore a more resilient stand composition and structure. Approximately 98 percent of the forest stands in the project area are classified as mature/late seral age class, while the Caribou Revised Forest Plan identifies a desired condition of 20 to 40 percent mature/late seral stands across the forest. Prescribed fire is a management tool that can introduce disturbance incrementally into forest stands to create a greater diversity of age classes to improve resiliency. When considering this information and guidance from the Revised Forest Plan, the Caribou Prescribed Fire Restoration Project proposes to treat approximately 6,000 acres annually, with up to 60,000 acres to be treated over the next decade. Compared to current annual prescribed burning, which has averaged 200 to 3,500 acres per year across the forest, this demonstrates an increase in prescribed burning to create vegetation conditions that are more resilient to future disturbance.

## Proposed Action

The Caribou Prescribed Fire Restoration Project is proposing to increase the pace and scale of prescribed burning across portions of the Montpelier, Soda Springs, and Westside Ranger Districts on the Caribou-Targhee National Forest to reduce the risk of uncharacteristic wildfires; increase resilience of existing vegetation groups; and improve ecological function in native vegetation communities. The proposed action would also provide an added benefit to improve firefighter and public safety.

Prescribed fire may be implemented across approximately 266,000 acres of the Caribou-Targhee National Forest in both Idaho and Wyoming (figure 1). Large burn blocks (averaging about 12,000 acres in size) have been identified as areas to be evaluated for treatment, although the specific locations for prescribed fire within the burn blocks have not been identified at this time. These burn blocks are the project area and the terms “project area” and “burn blocks” are used interchangeably throughout the document and supporting information. Table 1 below shows the burn block names and approximate acres that would be considered for potential treatment and the maps show the location of each burn block.

**Table 1. Proposed burn blocks**

| Burn Block | Acres |
|---|---|
| Bennington | 10,707 |
| Birch Creek | 18,392 |
| Black Mountain | 9,728 |
| Bloomington Canyon | 10,535 |
| Bob Smith Creek | 4,307 |
| Cherry Creek | 10,022 |
| Crow Creek | 10,434 |
| Danish Canyon | 4,003 |
| Deep Creek | 18,301 |

| Burn Block | Acres |
|---|---|
| East Bannock | 13,742 |
| Four Mile Canyon | 10,430 |
| Georgetown Summit | 17,774 |
| Grace Front | 10,884 |
| Luthi | 7,697 |
| Main Canyon | 10,615 |
| Mink Creek | 11,990 |
| Pebble Basin | 18,579 |
| Reed Canyon | 5,195 |
| Stump Creek | 17,585 |
| Thayne Front | 27,050 |
| West Elkhorn | 11,236 |
| Worm Creek | 6,834 |
| **Total acres to be considered for treatment** | **266,039** |

Using the current knowledge of vegetation and habitat conditions, the Caribou-Targhee National Forest would annually identify specific areas for treatment. These areas would then be surveyed for resource conditions as required by the Caribou Revised Forest Plan (identified in the design elements for this project). A burn plan would be developed through an interdisciplinary process (described in the implementation checklist) to determine how to meet Revised Forest Plan standards for resources while using prescribed fire to achieve resiliency and ecological function of vegetation communities. Design elements identify that 30 to 50 percent of a burn block would be treated under this decision, with the goal of creating a mosaic effect of burned and unburned areas on the landscape. The forest would share their plans for prescribed fire with the public and forest permittees annually to share information and received feedback prior to implementation (see design elements).

Prescribed burning activities would focus on vegetation types that have fire regimes classified as (I) frequent, low severity; (II) moderate-frequency, mixed severity; or (III) infrequent, mixed-severity type fires. Burning activities will also focus on vegetation condition classes (2) moderate departure and (3) high departure from the natural range of variation (National Interagency Fuels Fire and Technology Transfer System 2010).

Within the area we propose to authorize for prescribed burning, our objective is to apply prescribed fire to up to 6,000 acres across the project area annually to meet the need identified above. This objective is based on the need described above and guidance in the Revised Forest Plan regarding the anticipated application of prescribed fire, but the actual acres of burning each year will be dependent upon budget, capacity, and availability of burn windows. Within the broader area where we propose to authorize the use of fire, the specific locations for prescribed fire have not been identified at this time.

Prescribed burning objectives would be accomplished through the identification of smaller site-specific treatment areas ranging in size from about 500 to 5,000 acres. Treatment boundaries would depend on the location-specific objectives and desired conditions. For example, smaller burn units could be used where infrastructure or other high value resources are present, whereas larger burn units could be designed where the prescribed fire objectives permit. In some situations, multiple treatment entries may be required for moving vegetation and habitat characteristics toward desired conditions. In the context of this proposed action, treatments include not only the type of fire applied to achieve an objective, but also the pre-fire actions, also known as burn preparation, needed to facilitate the application of fire. Prescribed fire treatment could be implemented year-round when weather and air-quality conditions allow the national forest to meet the objectives and desired conditions for burning.

Each burn area would be implemented in adherence with agency policy and direction, following the Interagency Prescribed Fire Planning and Implementation Procedures Guide (2017), which establishes national interagency standards. These standards describe what is minimally acceptable for prescribed fire planning and

implementation; provide consistent interagency guidance, common terms and definitions, and standardized procedures; make clear that firefighter and public safety is the first priority; ensure that risk management is incorporated into all prescribed fire planning and implementation; support safe, carefully planned, and cost-efficient prescribed fire operations; support the use of prescribed fire to reduce wildfire risk to communities, municipal watersheds, and resources; and support the use of prescribed fire to restore natural ecological processes and functions to achieve land management objectives.

Contained within this policy and direction are legal requirements for prescribed fire burn plans. Every burn plan must address the following required elements:

- technical review and approval from an agency administrator;
- ignition authorization;
- a go/no-go checklist; a complexity analysis;
- description of the prescribed fire area, vegetation, and values;
- objectives;
- funding;
- prescription parameters consisting of weather and fire behavior with fire behavior modeling;
- scheduling of ignition time frames or season durations and constraints;
- pre-burn considerations and weather;
- briefing checklists;
- required organization and equipment;
- communications plan;
- public and personnel safety and medical plans;
- a test fire;
- ignition plan;
- holding plan;
- contingency plan;
- wildfire declaration plan;
- smoke management and air quality compliance through permits and notifications;
- a monitoring plan; and
- any post-burn activities that must be completed.

Specific burn objectives, each burn unit size, the type of burn preparation and prescribed fire to be used, and the conditions under which burning is allowed would be documented in the burn plan prior to approval by the district ranger before implementation of treatments, in accordance with policy and direction for prescribed fire.

This proposed action does not apply to any active phosphate mine areas, research natural areas, developed recreation sites, permitted special use recreation sites, or areas of concentrated development and utilities. The proposed action would not apply to any lands in the Curlew National Grassland unit managed by the Caribou-Targhee National Forest. Use of prescribed fire is proposed in recommended wilderness and inventoried roadless areas in compliance with Revised Forest Plan direction and other agency policy. The portions of the project area where prescribed fire could be used, and areas excluded under this project are shown in the maps of the proposed action.

### Design Elements and Implementation Checklist

Prior to using any prescribed fire, verification of specific treatment areas would be conducted by an interdisciplinary team of resource specialists to ensure treatment location and design are consistent with the 2003 Caribou Revised Forest Plan, the direction included in this NEPA document, and other agency direction. The design elements and implementation checklist are key elements of the proposed action which help to ensure statutory and regulatory requirements would be met.

- The design elements are listed in Appendix 1. They describe how resource conditions could limit areas of prescribed burning and where prescribed fire may be adjusted, limited or excluded. During implementation, other areas in addition to those mentioned above, could be removed from the proposed action due to natural resource or other considerations. Some areas of the forest have specific restrictions on how and where prescribed fire can be used in accordance with previous planning decisions, including the 2003 Caribou Revised Forest Plan and Greater Sage Grouse Amendment. Those areas would be recognized and addressed through Revised Forest Plan consistency as well as through design elements adopted as part of the analysis of the proposed action.
- The Implementation Checklist, located in Appendix 2 of this document, will direct specific tasks that need to occur prior to applying fire in an area. Among other elements, the implementation checklist will ensure statutory and regulatory requirements would be met. Specifically, but not limited to, the following: the tribal consultation that would occur; which regulatory agencies would be consulted (formally or informally); the development of the prescribed fire burn plan; which state and county air quality permits need to be obtained; where site-specific resource surveys would be conducted; what permittees will be identified; what public notices would be provided; and other specific steps that would be completed prior to applying treatment actions

The design elements and implementation checklist are included in the sections that follow.

### Types of Prescribed Fire

Prescribed fire in this decision includes the following types of fire:

- **Underburning**— kind of low-intensity prescribed fire used to reduce ladder fuels to remove surface fuels but not the overstory vegetation. It is used as both a first entry and maintenance burning primarily in conifer forests. Underburning could be implemented through either hand ignition or helicopter use.
- **Broadcast burning**—a type of mixed intensity prescribed fire that uses surface fire on a broad area of a burn unit, often when no overstory trees are present to increase structure, age, and species diversity (such as sagebrush, pinyon-juniper vegetation communities). In some instances, broadcast burning is used to remove overstory vegetation to create openings and optimal conditions for regenerating vegetation, such as in subalpine conifer or aspen vegetation communities. Broadcast burning could be implemented through either hand ignition or helicopter use.
- **Jackpot burning**—a modified type of underburn or broadcast burn, where there are concentrations (or "jackpots") of vegetative fuel that create pockets of higher intensity burning (most often in conifer vegetation communities). The result would be a mosaic burn pattern. It can also be used in lieu of broadcast burning to burn smaller pockets of surface fuels to meet key objectives. Jackpot burning could be implemented through either hand ignition or helicopter use.
- **Pile burning**—prescribed fire that burns discrete piles of fuels with some surface fire allowed to spread between them. This is used primarily in conifer and pinyon-juniper vegetation communities. It is used near fireline construction, near values at risk such as the wildland-urban interface, or during initial burning where fuels reduction is needed to achieve the objectives of a future underburn. Pile burning would be implemented with hand ignition.

### Pre-treatment Actions (Burn Preparation)

To provide the conditions necessary for each type of prescribed fire treatment to meet the purpose and need, some activities may be needed to ensure the success of the described treatment. These pre-treatment activities would vary by vegetation type, objectives, and conditions. Such activities would be explained in the burn plan for each unit, prior to project implementation. Those activities for burn preparation may include the following:

- Slashing, hand thinning, piling, and pile burning would be conducted to create a fuel bed to carry fire where necessary, and to reduce overhead tree mortality where necessary.

- Natural features would be used as much as possible, requiring minimal fireline construction. Hand-constructed fireline could be used to protect highly valued resources and assets and would be constructed in accordance with Forest Service best management practices and rehabilitated post burn. Slashing and tree felling commensurate with expected fire behavior to reinforce control lines where necessary. Mastication may also be used to create fuel breaks to control burn spread.
- Limited cross-country motorized vehicle travel, where resource conditions allow. Otherwise, existing routes and staging areas will be used for fire resources and aviation assets.
- Limited, site-specific amounts of mastication of fuels may be used to create a more continuous fuel bed in small areas where needed.

These pre-treatment activities will not be applied in areas where forest plan direction or other agency regulations prohibits such activities, see design elements for areas where pre-treatment activities will not occur.

It is important to note that this proposed action does not include the use of ground-based timber harvesting system and none of the proposed treatment actions include pre-commercial thinning. In areas where specialists determine that fuel loading and/or stand structure is such that prescribed fire behavior might exceed acceptable thresholds and pose risk to prescriptive objectives and/or highly valued resources and assets (wildland-urban interface, infrastructure, or sensitive resources, etc.), prescribed fire might not be the best treatment. In these situations, pre-treatment using ground-based timber harvesting could be planned under a separate National Environmental Policy Act process and decision.

### Changes to the Proposed Action since Scoping

The forest has made changes to the proposed action based on the scoping comments received in response to the October 28, 2020, scoping notification. The use of a Categorical Exclusion was initially anticipated, however upon review of the public comment received, the forest supervisor decided to prepare an environmental assessment, thereby providing additional opportunities for public comment. The forest has reduced the acres of prescribed burning proposed in Revised Forest Plan prescription areas for forest management, in response to public comment received expressing concern that the use of prescribed fire could lead to the loss of merchantable timber. Some areas within forest management prescription areas (5.2(b) and 5.2(c)) are included in the proposed action because vegetation data indicates that merchantable timber is not in these locations and that there are vegetation communities, such as aspen, that would benefit from a reintroduction of fire (see design elements for additional guidance about the treatment of stands that are mechanically accessible and economically feasible to harvest). The forest removed treatments from prescription area 2.1.3 to reduce potential effects to a municipal watershed. The forest has also removed all lands identified as priority habitat management areas (PHMA), important habitat management areas (IHMA), and general habitat management areas (GHMA) for the greater sage grouse, to reduce effects to habitat for the species.

The forest has also made changes to the design elements based on public comment. The changes to design elements include: evaluation of potential old growth and mature/late seral habitat prior to implementation of prescribed fire activities to meet Revised Forest Plan standards and guidelines; evaluation of past management at the 5$^{th}$ code hydrological unit code (HUC) to determine the size and scope of proposed activities to meet Revised Forest Plan standards and guidelines; application of fire within burn blocks; application of fire where timber harvest in not feasible; application of fire within grazing allotments; measures to be taken in aquatic influence zones; coordination with grazing permittees; information sharing with permittees and the public about where prescribed burning is planned; identification of what type of monitoring will occur following treatment; and other resource specific design elements. Additional information regarding the process of review by resource specialists and line officer approval has also been added to the implementation checklist.

### Comments Regarding Landscape-level Analysis and Site-Specificity

Several comments suggested that the proposal was too broad or lacked specific locations or survey data necessary to do environmental analysis. Others similarly suggested that it would be appropriate to use a programmatic environmental assessment. As stated in the purpose and need, the project is designed intentionally to allow for flexibility needed to address changing conditions. Rather than identifying specific locations for prescribed fire now,

this project uses design elements and the implementation checklist to provide sideboards to the actions; ensure consistency with other laws, regulations, and policies; and to reduce environmental effects. Our analysis considers application of fire and associated treatments within the analysis area, along with the design elements and location-specific review required in the implementation checklist. When all these pieces are considered, our analysis found that the proposal would not have a significant adverse effect (see **Error! Reference source not found.** section). The Caribou-Targhee National Forest has decades of experience analyzing and implementing prescribed fire actions. This proposed action framework draws on our experience with forest conditions and analysis to allow for a meaningful evaluation of impacts and sufficient level of detail necessary to inform the required NEPA determinations.

This approach to planning is needed to allow for implementation to react to changing on-the-ground conditions (for example unpredictable wildfires) over the next 15 to 20 years. Our normal approach to planning can take a season or more of survey work, years to plan, and a decade or more to accomplish, and in the meantime project area conditions can drastically change. In addition, by the time we implement under this existing model, the survey and analysis data has become stale. The landscape level planning approach we are proposing is needed to increase the pace and scale of restoration – we want to increase prescribed burning to better match the ecological need, be more responsive to funding sources, and allow for flexibility with burn windows.

Similarly, several comments suggested that detailed and location-specific resource survey should be completed and addressed in the analysis. Under the proposed action framework, location specific review and survey to confirm resource conditions and the need for design elements or adjustments would occur once units are identified for planning and prior to implementing prescribed fire. This would help ensure we have the most current and best available information to inform implementation. Resource specialists would review the design elements and implementation checklist and determine what work needs to be done in that specific unit, depending on the conditions and resources present.

### Alternatives Considered but Not Analyzed in Detail

The responsible official considered analyzing the effects of the proposed action as scoped in October 2020, but ultimately determined that he wanted to modify the proposed action to respond to scoping comments received and that he was unlikely to choose the original proposed action as his selected alternative. Therefore, the original proposed action was not analyzed in detail.

No alternatives to the proposed action are considered in detail in this environmental assessment. The Potentially Affected Environment section considers current and ongoing activities and trends in the analysis area and generally discusses continued trends if the proposed action is not taken (Consideration of No Action).

Some commenters suggested that there should be an alternative that specifically addresses climate change, livestock grazing impacts on forest stands, understory conditions and aspen recruitment. The purpose and need defined for this project focuses on the need to restore fire to reduce the risk of uncharacteristic wildfire, improve resiliency of vegetation communities to disturbances, and improve ecological function. Therefore, the proposed action is limited to the use of prescribed fire and associated activities to address trends such as reduced winter precipitation, earlier spring snowmelt, and longer dry seasons which are associated with a changing climate. These conditions have created a need for a more proactive use of prescribed fire to reduce the severity of effects from a large, uncontrolled wildfire. The project also identifies that aspen restoration is one of the themes that be used to identify treatment locations as suggested by the commenter. Design elements identify that monitoring will occur following prescribed burns to determine if livestock is using the treated area in a way that is detrimental to resources, but the management of livestock itself is outside the scope of the proposed action.

## Agencies and Persons Consulted

Information about the Caribou Prescribed Fire Restoration Project was sent out to the public on October 28, 2020, requesting comments within 30 days. Due to an error in the email address provided for comments, the time for submitting comments was extended to December 30, 2020. Thirteen comments on the Caribou Prescribed Fire Restoration Project were received in this timeframe.

The comments received during the scoping period were used to make changes to the proposed action, as is described above. Other comments have been addressed by providing information about effects to resources in this environmental assessment and associated project file exhibits.

Given the nature of the project, the Responsible Official consulted the following agencies, organizations, tribes and persons during development and analysis.

**Agencies**

U.S. Army Corps of Engineers; BLM; National Park Service; U.S. Fish and Wildlife Service; National Resource Conservation Service; Environmental Protection Agency; Idaho Fish and Game; Idaho Department of Parks and Recreation; Idaho State Department of Agriculture; Idaho Office of Species Conservation; Idaho Department of Water Resources; Wyoming State Engineers Office; Wyoming Department of Transportation; Wyoming DEQ Air Quality, Administration, and Land Quality; Wyoming Department of Agriculture; Wyoming Department of Revenue; Wyoming office of Tourism; Wyoming State Parks, Historic Sites, and Trails; Wyoming Water Development Commission; Wyoming Geological Survey; Wyoming Livestock Board; Wyoming State Forestry Division; Wyoming Game and Fish; Wyoming Office of State Lands and Investments

**Organizations/Businesses**

Rocky Mountain Elk Foundation; Greater Yellowstone Coalition; Wyoming Wool Growers Association; Center for Biological Diversity; Teton Regional Land Trust; Snake River Cutthroats; Idaho Wool Growers Association; Over the Hill Gang ATV Club; Great Western Trail -Wyoming Council; Idaho Conservation League; Caribou County; Idaho Chapter of the Oregon California Trails Association; Gallatin Wildlife Association; Advocates for Multi-Use of Public Lands; American Forest Resource Council; Yellowstone to Uintas; Wildland Defense; Boy Scouts of America; Western Watersheds Project; Yellowstone to Yukon Conservation Initiative; The Nature Conservancy; Blue Ribbon Coalition; Native Ecosystems Council; Backcountry Horsemen

**Native American Tribes**

Shoshone-Bannock Tribes

**State/Local Governments**

Fremont County; Teton County; Caribou County; Lincoln County; City of Pocatello; City of Soda Springs

**Elected Officials**

Congressman Mike Simpson; Wyoming Office of the Governor; Senator Mike Crapo

**Individuals**

Other individuals and entities that have asked to receive information regarding activities on the Caribou-Targhee National Forest.

## Supporting Project Documentation

**Table 2: Applicable project file documentation to agencies & persons consulted**

| Documentation Type |
|---|
| Comment consideration table |

# ENVIRONMENTAL IMPACTS REVIEW

This environmental analysis is conducted according to the Council on Environmental Quality's regulations for implementing the procedural provisions of the National Environmental Policy Act, effective September 14, 2020 (40 CFR §§1500-1508, 85 FR 137, p. 43357, July 16, 2020). These regulations apply to any NEPA process that begins after September 14, 2020.

The Potentially Affected Environment section describes the affected area, setting, and its resources, including ongoing and reasonably foreseeable activities and consideration of not taking action. Then, the following sections describe how the project complies with the relevant laws, regulations, and policies, including the National

Environmental Policy Act section. That section describes the degree of effects and other findings the Responsible Official would use to make a Finding of No Significant Impact. Finally, the Other Analysis Topics section includes additional analysis prepared to address concerns from public scoping.

Consistent with current regulations for NEPA, the effects (or impacts) discussions focus on changes to the human environment from the proposed action that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action, including those effects that occur at the same time and place as the proposed action and may include effects that are later in time or farther removed in distance from the proposed action or alternatives. Effects do not include those that the agency has no ability to prevent due to limited statutory authority or would occur regardless of the proposed action.

## Potentially Affected Environment

The proposal considers the application of prescribed fire on National Forest System lands on the Caribou-Targhee National Forest, within the burn blocks identified on the maps of the Caribou Prescribed Fire Restoration project. As described the Purpose and Need section, about 223,535 of these lands are moderately to highly departed from their natural fire regime. The burn blocks are located on portions of the Montpelier, Soda Springs, and Westside Ranger Districts. Approximately 81 percent of the lands identified for potential treatment are within Idaho Roadless Areas, where little management of vegetation has occurred, and years of fire suppression have allowed for fuels accumulation and vegetation conditions to depart from their natural range of variability. The proposed action includes implementation of fire on 500 to 5,000 acre burn units, with approximately 6,000 acres of prescribed fire to be implemented annually. As the pace and scale of prescribed burning grows under this project, the aggregated effects of restoration may be felt across the forest; however, most direct and indirect effects would be local at the burn unit where prescribed burning is being implemented.

As described in more detail of the Purpose and Need section, the natural fire regime of many of the vegetation communities in the project area were altered by fire suppression and other human activities over the last century. In many cases, fires are less frequent and more severe as high accumulations of fuel build up between fires occur in conifer forests or non-forested areas that are experiencing conifer encroachment. These communities that are departed in composition, structure, and function are less resilient to disturbances like changing climate, invasive species, insects and disease, and large, high-severity wildfires.

**Vegetation types:** The primary vegetation types that occur in the project area include Douglas-fir/limber-pine, mixed conifer including lodgepole pine, subalpine fir/Engelmann spruce, and quaking aspen. The acres of Douglas-fir appear to be increasing on the forest while the acres of aspen are decreasing, due to a lack of disturbances such as fire. Limber pine occupies a much smaller portion of the landscape. Juniper woodland communities are scattered throughout the project area and are expanding into areas historically occupied by sagebrush-grassland ecosystems, increasing the risk of higher intensity fires. The project area also includes non-forested and woodland vegetation communities which provide habitat and forage opportunities for wildlife. See the Other Analysis section for more detailed discussion of the potentially affected environment for vegetation types.

**Wildlife and plants:** There are federally listed plant and animal species that could occur within the project area and Regional Forester Sensitive Species of plants, terrestrial animals, and aquatic species that could be affected by proposed activities. In addition, bird species protected by the Migratory Bird Treaty Act are present in the areas proposed for treatment. Each species has unique habitat requirements, which often contrast as one species may require open or early successional habitat, while another species requires mature forest. The project area provides a diverse range of suitable habitats for many species.

**Watersheds:** The project area includes 109 category 4a streams and 120 category 5 streams, which are listed as impaired water quality and require a TMDL on the 2018/2020 303(d) list for sediment or other parameters (State of Idaho, 2018).

**Cultural and historic resources**: The area of potential effect would be determined for each burn area/unit and would be surveyed to determine the specific resources present, as described in the implementation checklist.

**Non-native Invasive Species:** There are 28 non-native invasive plant species currently being targeted by the forest weed management program across all districts where project activities are proposed. There are treatment activities and monitoring for non-native invasive plant species occurring on national forest system lands across the project.

**Air quality**: Currently National Forest System Lands provide abundant and clean air. Under the Clean Air Act, Class I airsheds include designated national monuments and national parks, international parks, and designated wilderness areas. In addition, non-Federal lands under the jurisdiction of a state or a tribe may be designated upon request. The project area is not located within any Class 1 airsheds but is located within 70 miles or less of four class 1 airsheds. Ongoing effects to air quality include human activities and smoke from wildfires. Wildfires, particularly large or severe wildfires, provide extended periods of smoke as they are unplanned and may not occur when appropriate dispersion will happen. This could result in impacts to human health in nearby communities and to the environment, such as wildlife.

**Range:** There are seventy-two allotments located within the proposed burn units, including ceded lands with reserved grazing rights within proposed burn blocks.

**Special Management Areas:**

- There are 20 Idaho roadless areas within the project area that total 216,178 acres (81 percent) of the acres proposed for potential prescribed burn treatments. The roadless areas span across all five themes identified in the Idaho Roadless Rule. The 2003 Caribou Revised Forest Plan identifies approximately 11 prescription areas that apply to the roadless areas potentially affected by treatment.
- There is one recommended wilderness area, Caribou City, which has acres proposed for prescribed fire treatment. The area is largely free of man-made facilities and summer travel is non-motorized. This area is managed to maintain wilderness character and allow natural disturbance processes to play their natural ecological role in the environment.
- There are National Historic Trail segments for the Oregon and California Trails that cross through the project area and are managed for visitors to experience a landscape that is similar to the one that travelers experienced historically.
- There are two waterbodies that are considered eligible under the Wild and Scenic Rivers act that are managed as recreational rivers based on their outstandingly remarkable values. Neither of the waterbodies are within the project area but they are adjacent to areas proposed for treatment.

This proposed action does not apply to any active phosphate mine areas, research natural areas, developed recreation sites, permitted special use recreation sites, or areas of concentrated development and utilities. This decision would not apply to any lands in the Curlew National Grassland unit managed by the Caribou-Targhee National Forest.

**Ongoing and reasonably foreseeable management activities** occurring across the Caribou Prescribed Fire Restoration project area include grazing; integrated weed management; recreational use and management; vegetation management; ecosystem and habitat restoration; and special uses such as utilities or rights of way. The current list of projects that are reasonably foreseeable actions is provided on the forest website: https://www.fs.usda.gov/projects/ctnf/landmanagement/projects. The proposed project could be implemented where other management activities have occurred, are ongoing, or are planned to occur if proposed activities will move the area towards desired conditions. These actions would be considered in selecting locations for burning, developing burn units, identifying location-specific desired conditions, applying design elements, and meeting Revised Forest Plan standards and guidelines.

Climate change has ongoing affects to various resources in the analysis area. Multiple studies suggest that the Great Basin area is an area most at risk to regional climate change driven fire patterns. Large contiguous areas could potentially be reverted to early successional or very young vegetation, as well as potentially affecting the species composition. This can occur throughout the project area in various vegetation types. Studies have shown that juniper expansion and infill have occurred over time due to factors such as fire exclusion, cessation of burning by Native Americans and climate related conditions (Murphy et. al. 2019). These changes to the various vegetation

conditions could potentially be detrimental to various species habitat and the wildland urban interface. The potential increase in very large fire potential has important implications for ecosystems, regional air quality, communities, and regional air quality as well as carbon emissions (Barbero et. al 2015).

## Consideration of No Action

If no action were taken, current trends described above would be anticipated to continue. Limited prescribed fire operations (3,500 or less acres per year) would continue through other past or future planning efforts. Disturbance agents would continue to occur, and wildfire will likely continue to be out of its historical range for an extended period of time. It is anticipated that the increasing length and severity of wildland fire seasons in the U.S. will continue. The no action would take much longer to change existing stand structure or provide opportunities to reduce or alter current fuel conditions that would favor less severe wildfire intensity and effects – particularly in priority areas (see Proposed Action section). Within forested habitat types, fuels would continue to increase, except where a stand replacement type of fire may occur. Without more widespread application of prescribed fire, increased forest floor fuels, trees with an abundance of lower limbs, and an understory of younger age classes would continue to develop. The increasing understory creates a ladder of available fuels that can carry ground fire into crowns of the overstory trees. Wildfires in this type of stand would likely burn with high intensity and result in a stand replacement fire where the overstory trees are consumed. These increased fuel profiles would continue to result in ever increasingly difficult suppression efforts to control a wildfire if ignition occurred. The process of succession occurring within these ecosystems would contribute to larger and more intense wildfires.

Because the current pace of prescribed burning would affect only a very small portion of the forest on an annual basis, the potential effects of no action would likely be amplified over time. Increasing hazardous fuels that propagate larger, more intense wildfires would have a cascading negative effect on air quality, wildlife habitat, and public health. In addition, the potential to adversely affect federally listed or sensitive species, watershed quality, and cultural resources will continue to increase.

## National Forest Management Act (NFMA) – Land Management Plan Consistency

**The pertinent specialists have reviewed the project and made the following determinations regarding consistency with applicable Land Management Plan direction, standards and guidelines.**

**Botany:** Consistent**.**

**Cultural/Heritage:** Consistent

**Engineering:** N/A

**Fisheries:** Consistent

**Fuels:** Consistent

**Hydro:** Consistent

**Lands/Special Uses:** N/A

**Minerals:** N/A

**Range:** Consistent

**Recreation:** Consistent

**Scenic Resources:** Consistent

**Soils:** Consistent

**Silviculture:** Consistent

**Special Management Areas:** Consistent

**Wildlife:** Consistent

The 2003 Revised Forest Plan for the Caribou National Forest (as amended) recognizes the need for prescribed fire on the landscape to protect infrastructure values as well as ecological processes. Some of the Revised Forest Plan goals that speak to this include:

- Forest resources are managed in accordance with the National Fire Plan, Ten-Year Comprehensive Strategy and Implementation Plan, and Cohesive Strategy to improve fire prevention and suppression, assist rural communities, reduce hazardous fuels, and restore fire-adapted ecosystems (Caribou Revised Forest Plan, p. 3-4).

- Fire is allowed to play its natural role where appropriate and desirable to reduce the risk of uncharacteristic wildland fires (Caribou Revised Forest Plan, p. 3-4).
- Fire and other management activities restore or maintain desirable vegetative communities and ecosystem processes. Fire management prescriptions are written to take advantage of natural lightning starts and to restore historical fire regimes (Caribou Revised Forest Plan, p. 3-4).
- Fire and other management activities are used to treat natural and activity fuels with priority on reducing risk from uncharacteristically large or intense wildland fires and protecting communities in the wildland-urban interface (Caribou Revised Forest Plan, p. 3-4).

The Revised Forest Plan also includes desired future conditions that encourage:

- Fire use, both prescribed fire and wildland fire use, enhances ecosystem integrity and resiliency, and maintains desired fuel levels (Caribou Revised Forest Plan, p. 3-4).
- Wildland fire operates within historic fire regimes appropriate for the vegetation and site (Caribou Revised Forest Plan, p. 3-4)

The proposed activity will treat within the following prescription areas identified in the Caribou Revised Forest Plan.

**Table 3. Prescription Areas from the Caribou Revised Forest Plan**

| Prescription Area* | Prescription Area Name | Acres |
|---|---|---|
| 1.3(e) | Recommended Wilderness | 4,343 |
| 2.1.2(b) | Visual Quality Maintenance | 3,204 |
| 2.1.5(b) | Special Emphasis Area Lander Trail | 337 |
| 2.7.1(d) | Elk and Deer Winter Range (Critical) | 38,942 |
| 2.7.2(d) | Elk and Deer Winter Range | 41,871 |
| 3.1(a) | Non-Motorized Recreation and Wildlife Security | 4,966 |
| 3.1(e) | Non-Motorized Recreation and Wildlife Security | 5,125 |
| 3.2(b) | Semi-Primitive Motorized | 55,736 |
| 3.2(e) | Semi-Primitive Motorized | 1,709 |
| 3.2(f) | Semi-Primitive Motorized | 4,277 |
| 3.3(b) | Semi-Primitive Restoration | 21,322 |
| 4.3(b) | Dispersed Camping Management | 16 |
| 5.2(b) | Forest Vegetation Management | 13,209 |
| 5.2(c) | Forest Vegetation Management | 2,608 |
| 6.2(b) | Range Management | 60,772 |
| 6.2(e) | Range Management | 7,602 |
| | **Total acres to be considered for treatment** | **266,039** |

* Prescription Area 2.8.3 for riparian areas is located within all the other prescription areas listed above. This prescription area is addressed through design elements and has not been identified separately.

## Supporting Project Documentation

**Table 4: Applicable project file documentation to support National Forest Management Act compliance**

| Documentation Type |
|---|
| Caribou Revised Forest Plan 2003 |
| Forest Plan Checklist |

## Endangered Species Act

Staff on the Caribou-Targhee National Forest will consult with the U.S. Fish and Wildlife Service about the project and effects, consistent with Section 7 of the Endangered Species Act. The project would be implemented to be consistent with the Endangered Species Act and Project concurrence issued by the service (see implementation checklist).

Consistent with FSM 2670.4 and to facilitate consultation with the U.S. Fish and Wildlife Service, a biological assessment is being prepared. The table below provides a brief summary of the findings in the draft biological assessment.

**Table 5: Effect determinations for Endangered Species Act**

| Species/Habitat | Status | Proposed or Designated Critical Habitat Present? | Determination* | Rationale |
|---|---|---|---|---|
| **Grizzly Bear** | Threatened | No | NE | Grizzly bears do not occur on the Caribou National Forest and during level one consultation the USFWS has concurred. There is no designated critical habitat for grizzly bear in or adjacent to project area. |
| **Yellow-billed Cuckoo** | Threatened | No | NE | There is no designated critical habitat in or adjacent to project area. Additionally, there is no suitable habitat in the project or cumulative effects area and no know observations of the species in the area. |
| **Canada Lynx** | Threatened | No | NLAA | The Bear River range, Gannett Hills area, and McCoy Creek are linkage areas. Lynx may use the area as transient habitat and could be displaced in the short-term by project activities, no denning occurs in the project area, lynx historically have inhabited fire-adapted ecosystems, reintroducing fire to the area to increase resiliency may benefit lynx. The proposed action may affect but is not likely to adversely affect Canada lynx. |
| **Whitebark Pine** | Proposed Threatened | No | No jeopardy | Whitebark pine are not known to occur on the Caribou National Forest, including the project area. |

*__NE__ – No Effect; **NLAA** – May Affect, Not Likely to Adversely Affect; **LAA** – May Affect, Likely to Adversely Affect; **No Jeopardy** - Not Likely to Jeopardize the Continued Existence or Adversely Modify Critical Habitat

## Supporting Project Documentation

**Table 6: Applicable project file documentation to support Endangered Species Act compliance**

| Documentation Type |
|---|
| Draft Biological Assessment |

## Sensitive Species (FSM 2670)

Biological evaluations were prepared for terrestrial, aquatic, and botanical sensitive species, as required by FSM 2670. The following table lists the sensitive species that may be affected by the proposed action, a determination of effect to those species, and a brief summary of the effects. More detailed information and analysis for each affected species is provided in the biological evaluations. The proposed action would not contribute to a trend towards federal listing or cause a loss of viability to the population or species for any Regional Forest Sensitive Species.

There are three management indicator species (MIS) outlined in the Caribou Revised Forest Plan (2003): Columbian sharp-tailed grouse for grassland and open canopy sagebrush habitats, sage-grouse for sagebrush habitats, and northern goshawk for mature and old forested habitats.

**Table 7: Sensitive species impact determinations**

| Species | Determination* | Rationale |
|---|---|---|
| **Gray Wolf** | NI | Occasional dispersing wolves have been documented however there are no known established packs within or adjacent to the project area; no further analysis needed. |
| **North American Wolverine** | MIIH | Potential suitable habitat present. High predicted use as a dispersal corridor, but dens would be avoided. Short-term disturbance and possible displacement during project activities. |
| **Pygmy Rabbit** | MIIH | Potential suitable habitat present. Most individuals are likely to escape harm. A small number of individuals may be adversely impacted, but population levels would not change. Fuels reduction would reduce the likelihood of habitat destruction from wildfires. |
| **Spotted bat** | MIIH | No known roosts or hibernacula within the project area but potential suitable foraging habitat present. Short-term potential impacts to foraging habitat but potential for long-term improvement. |
| **Townsend's Western big-eared bat** | MIIH | No known roosts or hibernacula within the project area but potential suitable foraging habitat present. Short-term potential impacts to foraging habitat but potential for long-term improvement. |
| **Bald eagle** | MIIH | No known nesting has occurred potential suitable foraging habitat present. Implementation may cause short-term disturbance to individuals. Expected long-term beneficial impacts to habitat. |
| **Peregrine falcon** | MIIH | No known nesting has occurred, suitable cliff habitat within 10 miles of project area, and suitable foraging habitat present. Implementation may cause short-term disturbance to individuals. Expected long-term beneficial impacts to habitat. |
| **Northern goshawk** | MIIH | Suitable nesting and foraging habitat present. Design elements would protect nesting birds. Implementation may cause short-term disturbance to individuals. Expected long-term beneficial impacts to habitat |

| Species | Determination* | Rationale |
|---|---|---|
| **Great gray owl** | MIIH | Suitable nesting and foraging habitat present. Design elements would protect nesting birds. Implementation may cause short-term disturbance to individuals. Expected long-term beneficial impacts on habitat. |
| **Boreal owl** | MIIH | Suitable nesting and foraging habitat present. Design elements would protect nesting birds. Implementation may cause short-term disturbance to individuals. Expected long-term beneficial impacts to habitat. |
| **Flammulated owl** | MIIH | Suitable nesting and foraging habitat present. Design elements would protect nesting birds. Implementation may cause short-term disturbance to individuals. Expected long-term beneficial impacts to habitat. |
| **Three-toed woodpecker** | MIIH | Suitable habitat present. Design elements would protect nesting birds. Implementation may cause short-term disturbance to individuals. Foraging habitat would be improved. |
| **Trumpeter swan** | NI | No swans have been observed using or nesting on suitable habitat in the project area. They have been documented at Palisades reservoir which is 3 miles from project area. No further analysis needed. |
| **Harlequin duck** | MIIH | Potential suitable habitat present. Design elements would protect nesting birds and riparian habitats. Short term disturbance to individuals. |
| **Greater sage-grouse** | MIIH | All known greater sage-grouse management areas (PHMA, IHMA, GHMA) will be avoided. Potential suitable habitat outside of avoidance areas may be present. Surveys would occur to determine if leks are present prior to treatment, if leks occur outside of avoided areas, they would be buffered. Most individuals are likely to escape harm. Fuels reduction would reduce the likelihood of habitat destruction from future wildfires. |
| **Columbian sharp-tailed grouse** | MIIH | Suitable habitat present. No known leks present in project, if a lek is found it will be avoided. Individual may be temporarily displaced during and soon after project activities. Prescribed fire may benefit habitat conditions for sharp-tailed grouse. |
| **Monarch butterfly** | MIIH | Suitable habitat present. Design element for mosaic burning patterns would provide habitat continuity. Eggs, larvae, and pupae may be harmed dependent on timing. |
| **Bonneville cutthroat trout** | MIIH | The proposed action is expected to result in potentially long-term beneficial effects to Bonneville cutthroat trout populations occurring in the project area by reducing the potential for large scale uncharacteristic wildfires. Some short-term negative effects such as localized sedimentation or decreased riparian cover may be observed, but these effects will likely be insignificant and would likely not negatively affect the functionality of existing habitat. |
| **Yellowstone cutthroat trout** | MIIH | The proposed action is expected to result in potentially long-term beneficial effects to the Yellowstone cutthroat trout populations occurring in the project area by reducing the potential for large scale uncharacteristic wildfires. Some short-term negative effects such as localized sedimentation or decreased riparian cover may be observed, but these effects would likely be insignificant and would likely not negatively affect the functionality of existing habitat. |

| Species | Determination* | Rationale |
|---|---|---|
| **Northern leatherside chub** | MIIH | The proposed action is expected to result in potentially long-term beneficial effects to the northern leatherside chub populations occurring in the project area by reducing the potential for large scale uncharacteristic wildfires. Some short-term negative effects such as localized sedimentation or decreased riparian cover may be observed, but these effects would likely be insignificant and would likely not negatively affect the functionality of existing habitat. |
| **Columbia spotted frog** | MIIH | The proposed action is expected to result in potentially long-term beneficial effects to the Columbia spotted frog by reducing the potential for large scale uncharacteristic wildfires. Some short-term negative effects such as increased sedimentation or decreased vegetated cover may be observed, but these effects will likely be insignificant and would likely not negatively affect the functionality of existing habitat. The proposed action would have a low risk of individuals being directly affected by the proposed fire activities because of their highly aquatic behaviors. |
| **Boreal (Western) toad** | MIIH | The proposed action is expected to result in potentially long-term beneficial effects to the boreal toad by reducing the potential for large scale uncharacteristic wildfires. Some short-term negative effects such as increased sedimentation or decreased vegetated cover may be observed, but these effects would likely be insignificant and would likely not negatively affect the functionality of existing habitat. The proposed action would have a low risk of individuals being directly affected by the proposed fire activities because of their highly aquatic behaviors. |
| **Starveling milkvetch** | MIIH | Negative impacts to populations and habitats would be mitigated or avoided via application of design elements under the proposed action. Suitable habitats are less likely to carry fire. |
| **Cache beardtongue** | MIIH | Negative impacts to populations and habitats would be mitigated or avoided via application of design elements under the proposed action. Suitable habitats are less likely to carry fire. |
| **Payson's bladderpod** | MIIH | Negative impacts to populations and habitats would be mitigated or avoided via application of design elements under the proposed action. Suitable habitats are less likely to carry fire. |

**NI** – No Impact; **MIIH**- May Impact Individuals or Habitat, but Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species; **WIFV** - Will Impact Individuals or Habitat with A Consequence That the Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss Of Viability To The Population Or Species

## Supporting Project Documentation

**Table 8: Applicable project file documentation to support agency sensitive species compliance**

| Documentation Type |
|---|
| Terrestrial Wildlife Biological Evaluation |
| Botanical Biological Evaluation |
| Aquatic Wildlife Biological Evaluation |

## National Historic Preservation Act (NHPA) – Section 106 Review

Section 106 review will be completed at the time when a burn unit has been identified.

As is described in the proposed action, no site-specific locations of proposed activities have been identified. The design elements and implementation checklist (Appendix 1 and 2) outline the process by which a potential burn area would be identified and surveyed for cultural resources as needed. Site -specific section 106 consultation would occur prior to implementation. Modifications to burn areas would be made as needed to protect cultural resources.

A section of the California National Historic Trail/Lander Road travels through the project area and is listed on the National Register of Historic Places with specific protection measures in place. Design elements and implementation checklist requirements would protect this historic trail and reduce the effects to visitors of this historic site.

The proposed action would reduce the effects of a large-scale, high-severity wildfire to occur, which would potentially threaten cultural resources. Over time the proposed activities would benefit cultural resources by protecting them from the effects of uncontrolled wildfires.

### Supporting Project Documentation

**Table 9: Applicable project file documentation to Support NHPA compliance**

| Documentation Type |
|---|
| Cultural Resources effects analysis |

## Tribal Consultation

A letter was sent to the Shoshone-Bannock Tribes at the time of scoping. As potential burn areas are identified, the forest would discuss these proposed areas with the tribe to gather input from them for implementation. This would also include discussion of activities that may affected ceded lands. No actions taken in this project would diminish the tribal grazing rights reserved on ceded lands. This would be part of the annual information sharing with the public and partner agencies that is identified in the design elements.

## Special Management Areas

**Idaho Roadless Areas:** There are 20 Idaho Roadless Areas within the project area designated by the 2008 Idaho Roadless Rule. Proposed activities could occur on approximately 216,000 acres within these Idaho Roadless Areas across all five management themes identified by the rule (see Table 10 below). Because design elements specify that prescribed fire will only be applied to 30 to 50 percent of each burn block, it is likely that less than half of these acres could be treated with prescribed fire to create a mosaic appearance that mimics natural burn events.

**Table 10. Idaho Roadless Area Management themes within the project area**

| Idaho Roadless Area Management Themes | Acres proposed for potential treatment | Percent of Project Area |
|---|---|---|
| Wild Land Recreation Theme | 4,343 | 2% |
| Forest Plan Special Area Theme | 2,179 | 1% |
| Primitive Theme | 10,077 | 4% |
| Backcountry Restoration Theme | 152,681 | 57% |
| General Forest, Rangeland, and Grassland Theme | 46,898 | 18% |
| Proposed Activities outside Idaho Roadless Areas | 49,860 | 19% |
| **Total** | **266,038** | **100%** |

The effects of prescribed burning associated activities on roadless characteristics are minimal. Short-term effects to air resources, opportunities for solitude, and the undeveloped nature of the roadless expanse may be perceived

by some forest visitors while implementation activities are taking place. Small stumps and slash piles would detract from the natural appearance of the landscape in local areas where slashing and non-commercial thinning occur but would not change the overall character of the roadless expanse. The diversity of plant and animal communities and their habitats would be improved over the long term, and negative effects from potential disturbance and fragmentation would be limited and short-term. Landscape character and integrity and the capability of the area to support natural ecological processes would be improved over the long term by re-introducing fire and reducing the potential effects of a large, high-severity wildfire. Effects of the proposed action would occur at the burn area scale (500 to 5,000 acres) and of low to moderate intensity, as per the application of design elements during burn plan development, and the implementation checklist prior to implementation. All types of prescribed fire could occur in Idaho Roadless Areas, but design element 18 specifies that no pre-treatment activities (slashing, hand thinning or mastication) will occur in either Wild Land Recreation or Primitive themes in the Caribou City, Meade Peak, or Stump Creek roadless areas.

The proposed activities meet all applicable Revised Forest Plan standards and are compliant with the 2008 Idaho Roadless Rule. Cutting of trees within IRAs is incidental to other activities not otherwise prohibited (for example prescribed burning) and therefore meets exceptions 294.24(a)(2); 294.24(b)(1)(iii) and (v); 294.24(c)(1)(i) through (v); and 294.24(d). In addition, prescribed burning would be applied where needed to improve habitat and restore ecosystems, which is not prohibited in any of the themes for the Idaho Roadless Areas.

The proposed activities were also evaluated for their effects on wilderness characteristics in Idaho Roadless areas and the ability for areas to be considered for wilderness designation in the future. Although project activities would have short-term effects on some wilderness characteristics such as untrammeled, undeveloped, natural, and solitude during the implementation of prescribed fire; there are not expected to be long term effects on any wilderness characteristic nor any effect that would prevent future consideration as wilderness.

**Recommended Wilderness:** The project area includes 4,367 acres of the Caribou City recommended wilderness area identified in the 2003 Caribou Revised Forest Plan. Ecological communities and processes would be affected by implementing prescribed fire within the recommended wilderness area and roadless areas to a slight degree but will also benefit from activities aimed at restoring the natural ecosystem. While fire can be a naturally occurring activity, prescribed fire, along with incidental pre-treatment and rehabilitation, would diminish the untrammeled, natural, and undeveloped character of the wilderness by adding modern human control and manipulation to the landscape. Evidence of fire would be prevalent and the reduced visually quality of the area may also highlight the trammeling action. To a certain extent, the current vegetation condition class was likely a result of past fire suppression practices. While the application of fire would cause negative short-term impacts during treatment, the overall effect to this wilderness character in the future would be improved over time by restoring the natural ecosystem. There would be short term effects to opportunities for solitude and primitive recreation, but this is temporary and only present during implementation. There should be no effect to the manageability of the recommended wilderness as a result of the proposed action. As there are no roads or developments proposed, and design elements are included for the rehabilitation of built line, there should be no motorized encroachments resulting from the proposed action.

As described above in the roadless area section, design elements limit the type of pre-treatment activities that can occur in this area and specify that prescribed fire will only be applied to 30 to 50 percent of burn blocks, therefore the proposed action should not impair the potential of Caribou City recommended wilderness area or other roadless areas for future wilderness consideration. The proposed action meets all applicable Revised Forest Plan standards.

**Eligible Wild and Scenic Rivers:** There are two waterways on the Caribou-Targhee National Forest that have been determined to be eligible for designation under the Wild and Scenic Rivers Act, Elk Valley Marsh and St. Charles Creek. They are both eligible for recreational designation, but neither WSR is included in the burn area and the proposed activities would not affect the outstandingly remarkable values identified for either waterway.

**National Historic Trail:** The project area includes a portion of the Lander Trail Special Emphasis Area identified by the 2003 Caribou Revised Forest Plan and portions of the California and Oregon National Historic Trails. Design elements and implementation checklist requirements identify the measures that would be taken to reduce the visual effects of proposed activities on these historic sites. During project activities, there may be short term closures of access points to protect public safety, but the reintroduction of fire onto the landscape surrounding the trails is anticipated to mimic the fire activity that occurred on the landscape historically and reduce the effects of a potential large, high-severity wildfire on the landscape.

### Supporting Project Documentation

**Table 11: Applicable project file documentation to support special management area compliance**

| Documentation Type |
|---|
| Roadless Characteristics Worksheet |
| Idaho Roadless Commission briefing paper |
| Wilderness Characteristics Worksheet |
| Caribou Prescribed Fire Restoration Project Scenic and Recreation Report |

## Clean Air Act (CAA)

The purpose of the Federal Clean Air Act (as amended) is to protect and enhance air quality while ensuring the protection of public health and welfare. National Ambient Air Quality Standards must be met by most state and Federal agencies, including the Forest Service to protect human health and the environment and acceptable maximum air quality concentrations. In addition, the Regional Haze Rule (40 CFR Part 5) calls for states to establish goals for improving visibility in mandatory class 1 areas (selected national parks and wilderness areas) and to develop long-term strategies for reducing the emissions of air pollutants that cause visibility impairment, including emissions from fire activities.

States are given the primary responsibility for air quality management. Section 110 of the Clean Air Act requires states to develop state implementation plans that identify how the State will attain and maintain National Ambient Air Quality Standards. The Clean Air Act also allows states, and some counties, to adopt unique permitting procedures and to apply more stringent standards. All management ignited fires shall comply with rules, regulations and permit procedures required by the Idaho Department of Health and Welfare, Department of Environmental Quality or appropriate agency from Wyoming and Utah. Planned activities shall be conducted in accordance with the Idaho State Implementation Plan of the Clean Air Act, the Montana/Idaho Smoke Management Plan, and other plans and policies that control smoke emissions on the National Forest.

Proposed prescribed burning would be conducted within established law, regulation, and policy. This includes the development of burn plans, which address air quality, and timing fire operations when air-quality conditions allow. Prior to burning, an approved burn plan would be in place. Current policy states that burn plans will follow PMS 484 Interagency Prescribed Fire Planning and Implementation Procedures Guide. (July 2017). The Prescribed Fire Plan, PMS 484-1, contains the site-specific requirements that provides the agency administrator the information needed to approve the plan and the burn boss the information needed to implement the plan. Element 19, Smoke Management and Air Quality of the template described how the project would comply with local, county, state, tribal, and federal air quality regulations. The plan will identify what permits, if any, are needed. It will also identify potential smoke receptors, non-attainment areas, Class I areas, and restricted areas that may be impacted. It will also include modeling outputs and mitigation strategies and techniques to reduce the impacts of smoke production, if required by State Implementation Plans, Tribal Implementation Plans, and/or state or local regulations. The burn plan development ensures air quality requirements of the Clean Air Act would be met. In order to proceed with prescribed burning, all state and Federal air quality regulations must be met in order to obtain the permission from the State or Air Pollution Control Board. The design elements and implementation checklist state that burning would only be initiated when authorized by the Air Pollution Control District or State.

### Supporting Project Documentation

**Table 12: Applicable project file documentation to support CAA compliance**

| Documentation Type |
|---|
| Air quality effects analysis |

## Clean Water Act (CWA)

This project is consistent with the Clean Water Act. Proposed treatments would not increase sedimentation into stream channels for the listed waterbodies described below.

The proposed prescribed burning treatments would have no impact to any of these causes of impairments for the section 303(d) listed waterbodies (listed in the Potentially Affected Environment section), except for sedimentation which could be affected by the proposed management activities. The project area includes 109 category 4a streams and 120 category 5 streams, which are listed as impaired water quality and require a TMDL on the 2018/2020 303(d) list for sediment or other parameters (State of Idaho, 2016). A detailed erosion analysis was completed and determined there was there is no upland erosion or sediment that would reach stream channels in all modeling scenarios.

### Supporting Project Documentation

**Table 13: Applicable project file documentation to support CWA compliance**

| Documentation Type |
|---|
| Erosion modeling report |
| Hydrology effects analysis summary |

## Pertinent Executive Orders

### EO 11988, Floodplain Management

This project is consistent with Executive Order 11988 regarding floodplain management, because design elements identify the conditions under which pre-treatments and prescribed fire can be used within aquatic influence zones (AIZs) when such treatments are beneficial to AIZs. These project design elements, including best management practices, would protect AIZs and subsequently floodplains.

### EO 11990 Wetland Protection

This project is also consistent with Executive Order 11990. The application of design elements and consultation with forest hydrologists and soil scientists prior to implementation, would protect wetland integrity.

### EO 13007, INDIAN SACRED SITES

E.O. 13007 requires the Forest Service to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. Sacred sites are defined as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites. During implementation of the project tribal consultation would be ongoing. As sites or locations are identified for prescribed burning, tribal consultation (quarterly forums or other venue) would be completed to

identify potential locations for cultural burning or historic properties with traditional religious and cultural significance that may need to be avoided.

### EO 13112, Invasive Species

The potential for non-native invasive plant spread was analyzed for Caribou Prescribed Fire Restoration project area. Invasive plants usually become established in natural communities where soil disturbance has provided suitable conditions for weed seed germination, where ground vegetation is disturbed and unable to outcompete the invaders, and (in forested areas) where tree canopy removal or thinning has allowed additional sunlight to reach the ground. The proposed prescribed burning activities would provide favorable conditions for establishment and spread for a number of weed species depending on the community's resistance to invasive species. Recognizing the need to account for community susceptibility related to community resistance, design elements have been incorporated into the proposed action that reduce or minimize the potential for introduction and/or spread of invasive species through monitoring and weed control. The design elements and implementation checklist considerably reduce the risk of spreading non-native invasive plants. The overall risk of non-native invasive plants increases due to the proposed prescribed fire actions is expected to be low.

### EO 13186, Migratory Birds

Under the National Forest Management Act (NFMA), the Forest Service is directed to "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." (P.L. 94-588, Sec 6 (g) (3) (B)). Direction for integrating migratory bird conservation into forest management and planning includes the January 2000 USDA Forest Service Landbird Conservation Strategic Plan; the Partners in Flight (PIF) Landbird Conservation Plans; and the 2001 Executive Order (EO)13186.

According to the 2008 "Memorandum of Understanding between the USDA Forest Service and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds," the Forest Service shall "consider approaches, to the extent practicable, for identifying and minimizing take that is incidental to otherwise lawful activities" (USDA Forest Service & USDI Fish and Wildlife Service 2008). Within the National Forests, migratory bird conservation focuses on providing a diversity of bird habitats at multiple spatial and temporal scales over the long term.

This project focuses on restoring fire-dependent ecosystems within the Caribou Prescribed Fire Restoration project area (See Purpose and Need). Individual migratory birds may be unintentionally adversely affected during project activities in the short-term. Migratory birds would likely avoid treatment areas during project implementation and be displaced to nearby habitat. Project implementation includes design elements to protect migratory birds through mosaic burn practices, snag retention, and avoidance of known nests. As a result, effects to reproduction would be minimal and bird populations would not be affected. Long term, proposed actions would improve habitat for some species of migratory birds. No significant adverse effects to migratory bird habitat would occur. Overall, the long-term benefits of proposed activities on wildlife habitat for migratory bird populations would outweigh short term adverse effects to a small number of individuals.

No significant adverse effects to migratory bird habitat are expected. Overall, the long-term benefits of proposed activities on wildlife habitat for migratory bird populations would outweigh short term adverse effects to a small number of individuals.

## National Environmental Policy Act (NEPA)

The effects discussion here takes into consideration all information included in the Environmental Impact Review section, as well as documentation included in the project record. Pertinent specialists have reviewed the proposed activities and provided the following input regarding the degree of potential effects for the factors considered by the responsible official to determine a Finding of No Significant Impact (FONSI).

Based on the consideration of the potentially affected environment and the degree of effects (below), the effects of the proposed action, including implementation of the design elements and implementation checklist, would not be significant.

## Factors Considered for Degree of Effects

### Both short- and long-term; beneficial and adverse effects

Long-term and aggregated effects (benefits) may be felt at a regional scale as the pace and scale of fire grows over time through implementation of many burns over many years. However, in the short-term, the effects of the project would occur at the local burn unit scale (500 to 5,000 acres) and be dispersed across the burn blocks where activities are proposed.

The interdisciplinary team participated in development of the proposed action, including design elements and the implementation checklist, to ensure that the project complies with law, regulation, and policy (including the Caribou Revised Forest Plan (as documented in the sections above)). As described in the previous section, the effects would be within standards set forth by the Revised Forest Plan and consistent with applicable environmental laws.

Due to the nature of the proposed action, no environmental analysis was conducted related to engineering, lands, minerals, or special uses. The proposed action includes design elements relative to coordination with special uses or permitted uses of national forest system lands. There would be no effects to roads, landownership, or minerals.

Resource specialists reviewed effects to threatened, endangered or sensitive species, cultural resources, water quality, air quality, special management areas, invasive species, and migratory birds. Those findings are summarized in the relevant sections above.

Resources specialists also evaluated effects to the following additional resources during project development: vegetation, fire and fuels, soils, scenery, recreation, and range resources.

- **Vegetation, Fire and Fuels:** The result of the proposed treatments on the vegetation communities in the project is designed to be beneficial over the short and long term. This project, and the individual burn plans, would be designed to improve the health and resiliency for vegetation communities to climate change, disease, wildfire, and other disturbances and restore natural disturbance regimes. Additionally, the removal of hazardous fuels would reduce the risk of a higher or undesirable fire intensity in the event of a wildfire. In response to public concerns, potential effects to limber pine, juniper woodlands, forest structure, and non-forest vegetation were analyzed in more detail in the ‘other analysis’ topics section below.
- **Soils:** Prescribed burning, particularly burn piles, have the potential to create areas of severe soil burning due to the length of time heat occurs in concentrated areas, causing loss of soil physical, biological, and chemical functions and a decrease in organic matter needed for future soil nutrient stores. The proposed prescribed burning is designed to be a low to moderate soil burn severity based on parameters that would be specified in a prescribed burn plan. In addition, design elements and an implementation checklist have been developed for this project to ensure soil functions and therefore soil quality is maintained. For example, higher soil and duff moisture expected during prescribed burning would limit areas of exposed mineral soil, limiting large-scale detrimental soil erosion. Localized minor erosion is expected but would not impact long-term soil productivity of the area (see Clean Water Act section above). Prescribed fires, with low to moderate burn severity, can also result in a positive soil response by; expediting nutrient cycling, decreasing woody canopy cover, improving herbaceous response, and improving overall vegetative ground cover which improves overall soil functions. Generally, localized negative impacts to the soil resources would be short lived because prescriptions would occur during favorable burn periods (for example, favorable weather conditions and planned burn blocks resulting in favorable fire behavior)

and best management practices would be implemented. Positive impacts to the soil resources would be variable but could extend 3 to 10 years after burning.

- **Scenery:** Scenic effects of prescribed fire are anticipated to be indistinguishable from the natural range of variation on the landscape due to naturally occurring fire. Actions with most potential to affect scenic quality in the short term are the use of control features and management techniques like fire lines or pre-treatment activities. Scenery design elements included in the proposed action would enable the proposed treatments to be implemented to meet visual quality objectives and without significant impacts to scenic resources. The proposed treatments would bring treated areas closer to their natural vegetation, fuel, and fire regimes; closer to the historic conditions that have created the natural landscape character and scenic quality. By bringing these conditions closer to the natural range of variability, the proposed treatments would create the conditions for improved scenic integrity and maintain scenic quality in the long term.
- **Recreation:** The proposed action may have temporary and minor impacts to recreation use within the project area but would not affect recreation access or opportunities in the short- or long-term. Recreationists and visitors may be temporarily affected by smoke, noise, or public safety closures, but these effects would be localized the burn area. The impact on dispersed recreation areas from the proposed action would be minimal due to project design elements and implementation coordination, as well as public notifications.
- **Range:** There are 72 grazing allotments located within the project area. Because the site-specific locations of prescribed fire treatments are not yet known, it is difficult to anticipate the potential effects to forage in any given burn block. As identified in design elements and the implementation checklist, the forest would work with permittees to inform them of what portion of their allotment may be burned and what livestock restrictions would need to be in place until vegetation objectives are met. Advanced notice would be provided to grazing permittees at least one grazing season in advance if their allotment is potentially affected. Monitoring for livestock and vegetation conditions would continue up to five years following treatment and ongoing coordination will continue between the permittee and permit administrator to determine when vegetative conditions allow for livestock to return to the allotment following treatment.

The reasonably foreseeable effects of the proposed action have been considered, consistent with the National Environmental Policy Act and implementing regulations. The environmental assessment was developed to determine whether or not the project would result in any significant environmental impacts requiring the preparation of an environmental impact statement. Project design elements and implementation coordination requirements were put in place to minimize any short-term or adverse impacts from project activities and ensure consistency with law, regulation, and policy. The interdisciplinary team did not identify any significant short-term or long-term adverse effects associated with implementing the proposed action and determined that the overall effect of implementing the project is expected to be beneficial long term.

### Effects on public health and safety

Prescribed burning would benefit public and firefighter safety by reducing hazardous fuels in the areas where burning is implemented (see purpose and need).

The burn planning would be consistent with the Interagency Prescribed Fire Planning and Implementation Procedures Guide (PMS-484) (2017) which establishes national interagency standards. These standards describe what is minimally acceptable for prescribed fire planning and implementation, prioritizes firefighter and public safety, ensure that risk management is incorporated into all prescribed fire planning and implementation to support safe, carefully planned, and cost-efficient prescribed fire operations. One aspect of this is developing a burn plan which provides site-specific parameters to provide for safety.

Prescribed burning may also affect public health and safety through effects to air quality from smoke. This is addressed under the Clean Air Act section above. The burn plan process, design elements, and implementation checklist ensure compliance with the Clean Air Act, as implemented by the States of Idaho, Wyoming, and Utah. By following these regulations and only burning on authorized days, the effects to public health are reduced and

would be anticipated to be short-term and local in nature. Public notice of planned burning would also lessen the degree of effects.

The implementation checklist ensures the public would be notified of planned burning through signage or closures of recreation areas.

#### Effects that would violate Federal, State, Tribal or local laws protecting the environment

The proposed action has been considered for compliance with applicable Federal, state, tribal, and local laws. As documented in the Environmental Impacts Review section of this document, no laws would be violated. No effects are anticipated that would violate Federal, state, tribal, or local laws protecting the environment.

## Other Analysis

The following analysis of forest structure, limber pine habitat, non-forest vegetation, and woodlands are included in the environmental assessment based on the Responsible Official's review of public comments. This analysis provides information to respond to concerns that were raised during the project scoping period.

### Forest Structure

Public comment raised the concern that prescribed burning of old growth habitats would degrade their value to wildlife. Project design elements identify how potential old growth and mature/late seral habitat would be evaluated and considered prior to implementation of prescribed fire activities. The responsible official asked the team to look at the potential effects to forest structure as a result of the proposed activities.

#### Potentially affected environment

The forest vegetation effects analysis looked at four forest vegetation cover types identified in the Revised Forest Plan EIS (Vol 1, p.3-92): Douglas-fir/limber pine, mixed conifer including lodgepole pine, Engelmann spruce/subalpine fir, and quaking aspen.

The Douglas-fir/limber pine cover type makes up 50 percent of the of the forested vegetative cover types within the project area. Current stand structures are typified by mature and late seral age classes of Douglas-fir with remnant amounts of quaking aspen and/or lodgepole pine. There are few acres are in the seedling/sapling/pole size classes (FEIS, pp. 3-87). Within the project area, approximately 99 percent of this vegetative cover type is classified as late seral and mature. Most of these stands have not experienced fire in over eighty years, creating fuel buildups and the potential to alter the previous fire regime from frequent light surface fire to long interval fires that produce mixed- or high-severity burning. These fires will often result in stand replacement burning during wind driven events (FEIS, pp. 3-88).

Mixed conifer including lodgepole makes up about 8 percent of the forested vegetative cover types within the project area, in which approximately 89 percent of these acres have been identified as to having late seral and mature structure, compared to 70 to 80 percent forest wide and 30 to 40 percent as a desired condition in the Revised Forest Plan. Fuel loading is high as dead lodgepole pine and aspen accumulate on the forest floor, and densities of live shade tolerant conifers increase.

The Englemann spruce/subalpine fir type represents about 6 percent of the forested vegetative cover types within the project area, with approximately 99 percent of the Englemann spruce/subalpine fir type in the mature and late seral stage and has missed several "thinning" fires over the past one hundred years. Some of these areas have heavy live and dead fuel buildups and the potential to alter the previous fire regime from frequent light surface fire to long interval fires that produce mixed or high severity burning (FEIS, p. 3-91). Fire history is not as straightforward in these types. In general, past policies of fire suppression have probably affected high-elevation subalpine stands less than other habitat types because of their relatively long fire-free intervals. Because of their susceptibility to fires originating at lower elevations, however, they can be affected by excessive fuel buildups in lower, more fire-prone forests.

Quaking aspen represents about 36 percent of the forested vegetative cover types within the project area, with approximately 97 percent of these acres in mature/late seral stage. It is estimated that 150 to 400 years before present, aspen may have occupied up to 425,000 acres on the Caribou-Targhee National Forest. Approximately 268,000 acres of aspen and aspen/conifer are present on the Forest today, a difference of 140,000 acres (Betz, Process Paper P). The loss is attributed primarily to natural succession of conifers in the absence of disturbance (FEIS, p. 3-91). The steady loss of aspen to conifers has reduced aspen habitat and the species that depend on the patterns and structures found in functioning aspen woodland. Over the past 100 to 150 years there has been an estimated 40 percent decline in the amount of aspen acres on the Forest. This is a high departure from historic range of variability (Revised Forest Plan, pp. 2-4).

The aspen type is at risk because many stands are in a mature and late seral age structure, conifers are succeeding aspen, and the historic fire regime is outside historic ranges. The current imbalance of forest structural stages (most stands in late seral stage) has pushed the landscape outside of its "safe operating space." Most stands in the late seral stage that historically had aspen as a component still have some aspen present however, they are moving beyond the safe zone, stems and root mass is being lost. If stands go another 100 years without disturbance, aspen and the resiliency to disturbance they provide could be lost in many stands.

The Caribou Revised Forest Plan set a forest structural stage desired future condition of 30 to 40 percent mature and late seral in conifer types (Douglas-fir/limber pine, mixed conifer, Englemann spruce/subalpine fir) and 20 to 40 percent in aspen types at the landscape scale (Revised Forest Plan, p. 3-17; FEIS 2-66, FEIS 3-92). It set this desired condition because being outside of the historic range puts the forest cover types, and thus the wildlife that depend on them, at risk (FEIS-3-87; PFC 2009). This desired future condition was not set due to a lack of mature and late seral structural stages, but rather because a balance of ages classes best meets the needs of wildlife and is more sustainable over time. The lack of structural heterogeneity is the biggest threat to forested ecosystems and is the result of the lack of fire the last one hundred and twenty years, or so (Beck 2016).

### Effects of the proposed action

The intent of this project is to reduce the risk of uncharacteristic wildfire to key ecosystem components by modifying and reducing natural fuel accumulation, focusing on a balance of reducing hazardous fuels and restoring fire into all fire dependent vegetation types. Application of prescribed fire is also intended to help the suppression of unwanted wildfires while protecting firefighter and public safety/values at risk. Current forest wide vegetation data indicates that 84 percent of the acres identified for potential treatment are late seral, 11 percent are mature, 2 percent are young/mid and 3 percent are seeding/sapling. Based on the best available data, forest structural stages are outside of desired future condition, with 95 percent of all forested acres classified as mature or late seral within the project area.

This imbalance was documented in the Revised Forest Plan, as was the need for management to address the imbalance. In the Wildlife Issues Section of the FEIS, it said: "To improve overall habitat diversity, management actions should focus on increasing the amount of early and mid-seral stands of forested vegetation" (FEIS 1-26). In the Ecosystem Management section it says: "In order to sustain a mosaic of forest structural classes, proposed management would introduce disturbance that would increase the amount of early- and mid- seral staged to improve biosocial diversity" (FEIS 1-14). This assessment indicates there is still a need to increase the seedling/sapling class and reduce the late seral class to "improve overall habitat diversity" and maintain a "dynamic and resilient" landscape. The results are similar when viewed by watershed or other landscape scale areas (Beck 2020). Re-introducing fire with desired outcomes of mixed-severity impacts, would move toward creating a balanced distribution of age classes and therefore Revised Forest Plan desired conditions.

Implementing the proposed action within the Douglas-fir/limber pine forest cover type would mimic natural disturbance regimes and the historic intervals in which they occur. Anticipated outcomes would be to interrupt natural succession patterns of Douglas-fir dominance by introducing low intensity prescribed fire that would be generally non-lethal to reduce densities of small understory trees and occasional overstory trees. However, at times pre-treatment actions may be needed to address conditions that are greatly departed from normal ecological-functioning conditions to avoid adverse stress to trees.

Within mixed conifer stands that include lodgepole pine, the anticipated outcomes would be to reduce hazardous fuels, improve resistance to insect and disease, and create age-class mosaics via prescribed burning that creates mixed-severity impacts. This minimizes the extent of stand-destroying fire over large areas, in addition to curbing the conversion to conifer species by interrupting the course of succession, and with repeated efforts, increase the proportion of lodgepole pine with each successive prescribed burn. Lodgepole pine on the Caribou evolved having non-serotinous cones which evolved under mixed-severity fires. Low to moderate fire may open the stand and permit regeneration of fir and spruce as well as more pine. Moderate fires in mixed stands kill most of the tolerant conifers but can spare some of the lodgepole pine.

Fire is a less frequent disturbance, in Englemann spruce/subalpine fir vegetation cover types, especially on wetter sites. Implementing prescribed burn methods would allow a mixture of low intensity fires and pockets of higher intensity fires. The former method would likely occur on wetter sites with moist fuels with intent of reducing accumulation of hazardous fuels. The latter method would work towards Revised Forest Plan desired structure by allowing for pockets of higher intensity fires to create a mosaic of stand ages and species composition, and reduces density in stands, thus increasing undergrowth productivity.

Moderate fires can rejuvenate deteriorating aspen across the landscape via vegetative reproduction (sprouting) and maintain some opportunities for seed dispersal and germination. Treatments would likely focus on clones at highest risk of conversion (Revised Forest Plan, p. 3-19). Treatment objectives would be to achieve 5,000 trees per acre over 70 percent of a given stand to create fully stocked aspen conditions (Revised Forest Plan, p. 3-45). Ideally, treatments would create blocks over 200 acres in size unless the natural patch size is smaller (Revised Forest Plan, p. 3-19). The primary intent is to halt the decline of aspen acres due to succession of aspen to conifer (Revised Forest Plan, p. 3-17, -19). Applying this management strategy is consistent with Revised Forest Plan guidelines to maintain or enhance the component where it exists (Revised Forest Plan, p. 4-63).

Overall, the proposed activities would gradually re-introduce prescribed fire as a disturbance agent on the landscape. This would allow for incremental modification of the forest structural stages found in the project area. It is anticipated that over years of implementation, proposed activities would result in a gradual increase in seedling/sapling age class, which would begin the process of introducing more heterogeneity of age classes and species diversity to the treated landscape. Because prescribed fire would be applied to only 30 to 50 percent of a burn block, it is anticipated that there would still be an abundance of forest stands in late seral and mature age classes following treatment, in a mosaic pattern with newly regenerated seedling/sapling stands. The goal for the project is to improve resiliency in the vegetation communities by introducing disturbance that would result in improved heterogeneity of forested stand structure, as identified in the Caribou Revised Forest Plan, without treating identified old growth stands, as identified in the introduction.

### Limber Pine

Public comment submitted during scoping included concerns about potential effects to limber pine as a result of proposed activities. As the commenter correctly identifies, limber pine makes up a small portion of the forest vegetation types.

Within the project area there are approximately 343 acres of limber pine vegetation type and it is generally found as a component of Douglas-fir cover types. Given the abundance and distribution within the project area in addition to where limber pine typically occurs in greater numbers vs. a minor component in Douglas-fir cover types, it is unlikely this species would endure adverse impacts. Either areas will be dropped from treatment, such as higher elevation, severe growing sites that lacks vegetation to carry a damaging fire, or the few trees that occur in mixed stands would likely withstand low intensity burns.

### Non-forested and woodland vegetation types

Public comment also raised concerns about potential effects to sagebrush habitat and woodland vegetation types, specifically juniper woodland habitat.

Non-Forested vegetation types accounts for approximately 32 percent or 85,000 acres within the project area. The predominate non-forested vegetation type is sagebrush/mountain brush, which accounts for 94 percent of the non-forested acres. Sagebrush/Mountain Brush structure relates to canopy cover density. For ecosystem biodiversity, processes, and functions, it is important to maintain a balanced range of canopy cover densities for ecological diversity (FEIS, p. 3-95). The Caribou RFP desired future conditions (DFC) for sagebrush/mountain brush is for 30 to 50 percent of the acres with a canopy cover density greater than 15 percent. Currently, 81 percent of the acres have a canopy cover density greater than 15 percent. Of the acres greater than 15 percent, approximately 62 percent of those acres have a canopy cover density that exceeds 25 percent.

This mix of canopy cover age classes is due to the lack of disturbances. Historically, disturbances (such as fire) would have set back succession causing the age classes (canopy cover) to be more equitably distributed. Being outside of the desired condition puts the non-forest ecosystem at risk to uncharacteristic disturbances and reduces its resilience to these disturbances. There is a need to improve the overall composition, health and resilience of the non-forested vegetation group. The lack of heterogeneity in canopy cover that dominates most stands, create conditions that will most likely result in larger patches of mortality from fire or other disturbance agents than wouldn't have been common under a natural disturbance regime.

The woodland vegetation group accounts for 18 percent of the acres within the project area and consists of bigtooth maple, juniper, and mountain mahogany. The desired condition for woodland types is to have multiple-aged shrub layers and a balanced shrub/herbaceous understory (Revised Forest Plan, p. 3-17). Primarily due to the lack of disturbance (such as fire), stand densities have increased reducing the shrub/herbaceous understory and expansion is occurring into adjacent sagebrush and mountain shrub cover types. The mixed-severity regime that historically shaped this vegetation type would have resulted in different canopy cover conditions (densities), helped maintain the shrub/herbaceous understory, and control the expansion into other cover types (FEIS, p. 3-71 and 72). Also, the lack of disturbance has changed the natural fire regime within Bigtooth maple dominated sites from a mixed-severity regime to a non-lethal fire regime. This is primarily due to the increase in overstory canopy densities and the associated decrease in the shrub/herbaceous understory.

Although there are no Revised Forest Plan objectives guiding abundance or structural stage for juniper woodlands which were raised in public comment, the Revised Forest Plan FEIS speaks to juniper management in the following instances related to this proposed action:

- Curb the historic range, and encroachment of juniper and other vegetation to restore the structural diversity and ecological function sagebrush communities that are moderately departed (5 to 15 percent) from historic range of variability canopy cover (FEIS, p. 3-95, 99).
- Conduct site specific analysis within juniper woodland types to determine management objectives and treatments (FEIS, p. 3-101) and to reduce risk of landscape scale, stand replacing fire while improving growing space conditions to strengthen resistance and resilience.

The proposed action details the types of prescribed fire and pre-treatment burn preparation activities that may occur within any given burn unit. How that specifically gets applied depends upon certain factors that define the overall stand condition and dynamic, such as species composition, age, structure and hazardous fuels assessments which will be evaluated at the time of implementation and identified in a vegetation prescription.

## Supporting Project Documentation

**Table 14: Applicable project file documentation to support effects discussions**

| Documentation Type |
|---|
| Vegetation effects analysis |
| Non-forest vegetation and woodlands effects analysis |
| Fire and Fuels effects analysis |
| Soils effects analysis |

| Documentation Type |
|---|
| Hydrology effects analysis |
| Scenery and recreation effects analysis |
| Range effects analysis |

## Administrative Review

The proposed project is subject to pre-decisional objection process at 36 CFR 218 Subparts A and B. Only those who submit timely and specific written comments §218.2 regarding the proposed project or activity during a public comment period established by the responsible official are eligible to file an objection §218.24(b)(6). Comments received during the initial scoping period will be carried forward and those commenters will be eligible to file an objection. The publication date of the legal notice in the newspaper of record, *Idaho State Journal,* is the exclusive means for calculating the time to submit written comments on a proposed project or activity. See the project website for a copy of the legal notice, information on how to submit a comment, and associated comment requirements, during the public comment period: https://www.fs.usda.gov/project/?project=59025

## MAPS

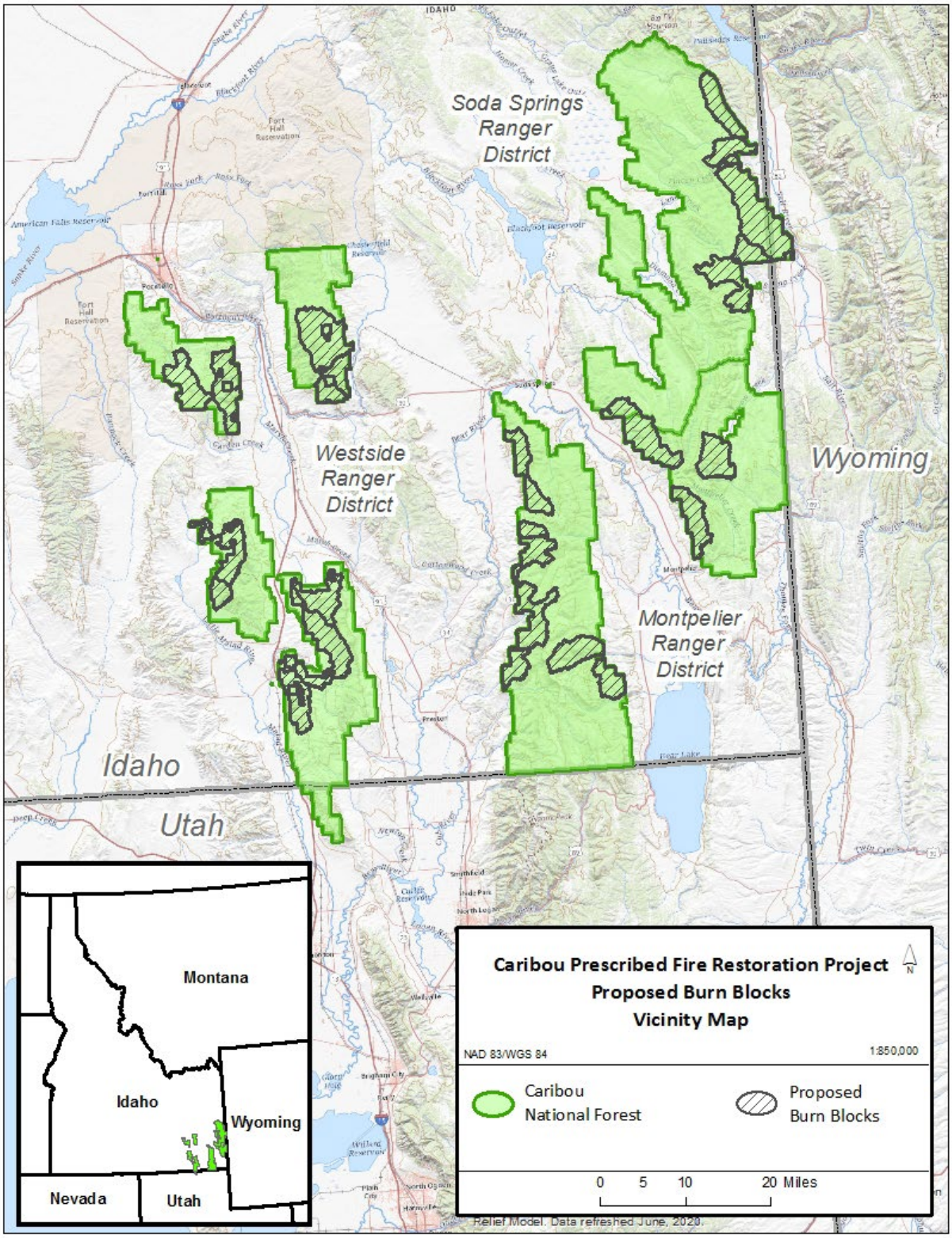


**Figure 1. Map of project area, which is the proposed burn blocks**

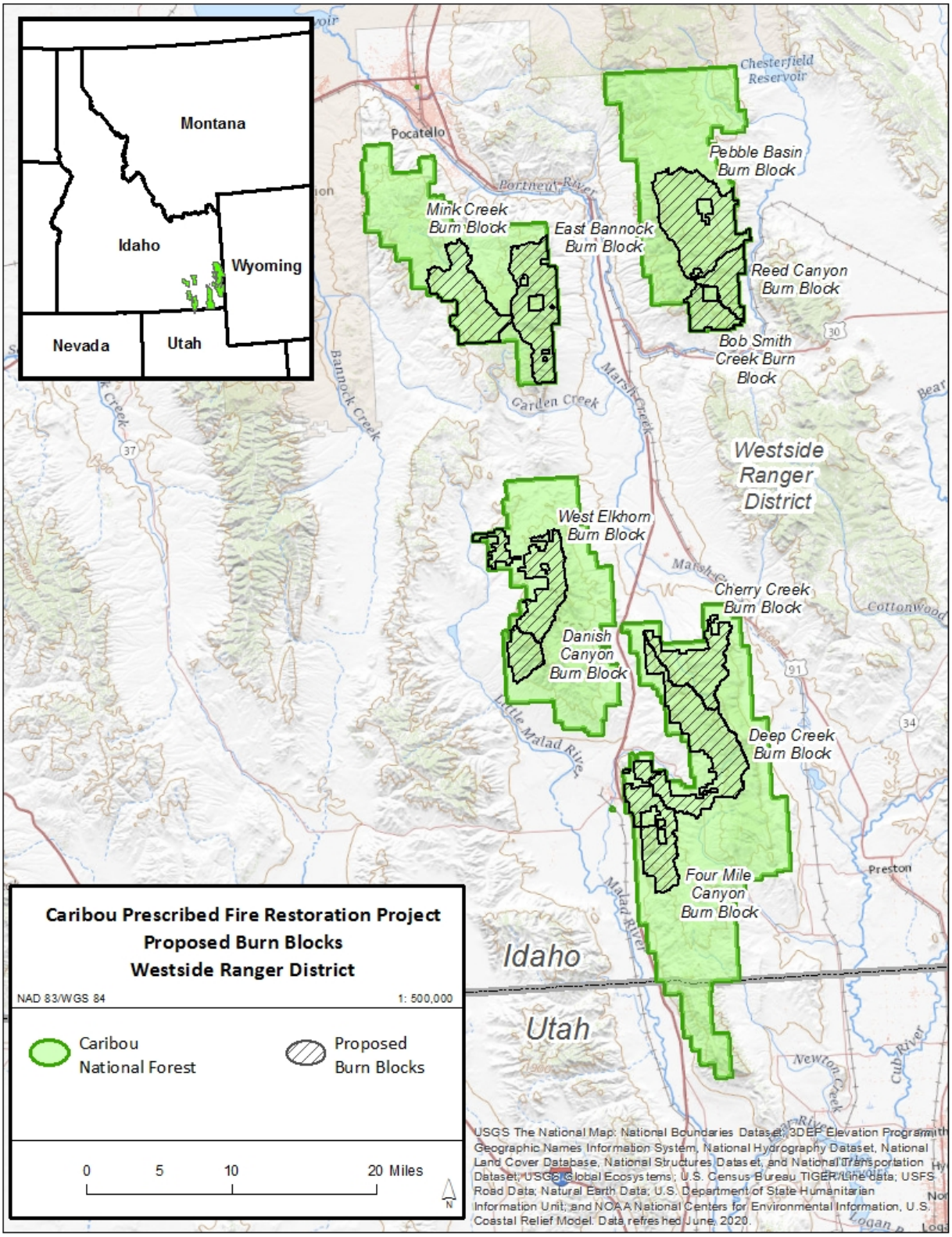


**Figure 2. Map of proposed burn blocks on Westside Ranger District**

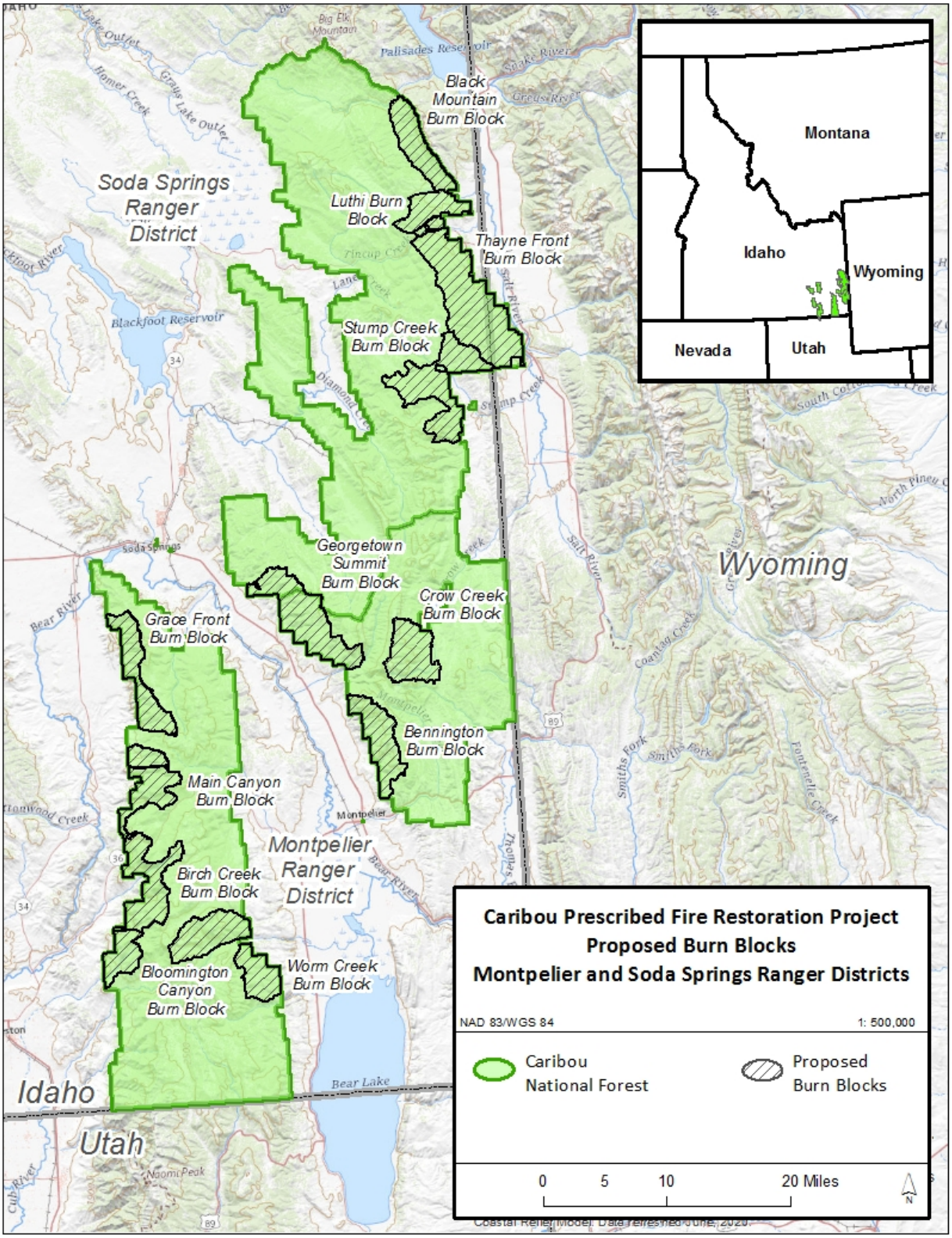


**Figure 3. Map of proposed burn blocks on Montpelier and Soda Springs Ranger Districts**

# APPENDIX 1 – DESIGN ELEMENTS

**Table 15. Design elements**

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| 1 | Prior to implementation, specific burn locations and strategies would be identified and proposed. The burn proposals would be reviewed by an interdisciplinary team for Revised Forest Plan, Forest Service policy, and National Environmental Policy Act compliance. The interdisciplinary team would report findings to the district ranger, who would approve the burn proposal along with additional design elements. | Prescribed Burning | Specific Burn Locations | Always | Demonstrate that the prescribed burns and associated activities are compliant with the Caribou Revised Forest Plan (as amended) and National Environmental Policy Act |
| 2 | Prior to implementation, site-specific review and discussion with associated regulatory agencies would occur, consistent with programmatic agreements or other consultation procedures (outlined in the implementation guide). | Consultation | Specific Burn Locations | Prior to implementation always | National Historic Preservation Act, Endangered Species Act, and Clean Air Act |
| 3 | No new roads would be constructed or created during project implementation. | Access | Burn Blocks | Always | Project-specific |
| 4 | Temporary area and route closures may be implemented to provide for public safety during treatment operations due to the presence of fire activity, smoke, and falling trees/snags. Signs would be posted as would a notification through public media. | Access | Burn Blocks | Always | Project-specific |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **5** | There are lands under other ownership jurisdiction located within the boundaries of the burn blocks. These lands would not be treated unless a cooperative agreement is in place between the land management agency and the landholder. | Access | Within or adjacent to Specific Burn Locations | Always | Project-specific |
| **6** | Prescribed burning would generally not exceed 6,000 acres a year and would not exceed 60,000 acres per decade. | Prescribed Burning | Entire Caribou National Forest | Always | Project-specific |
| **7** | Prescribed fire would only be applied to 30% to 50% of the Burn Blocks acreage. | Prescribed Burning | Burn Blocks | Always | Demonstrates that only portions of the Burn blocks will be targeted for treatment. |
| **8** | Prescribed burning would focus on vegetation types classified as fire regimes I, II, & III and vegetation condition classes 2 and 3. | Prescribed Burning | Specific Burn Locations | Always | Provides direction that prescribed burning will focus on the most departed vegetation types |
| **9** | Prescribed burns would be designed to mimic a mixed-severity wildfire, where burned areas include: unburned patches; low intensity underburn; areas where one-third to two-thirds of the vegetation is killed; and patches where almost all the vegetation is killed. | Prescribed Burning | Specific Burn Locations | Always | Project-specific |
| **10** | Prescribed burning would focus on the following treatment themes; aspen restoration, conifer and/or woodland encroachment into non-forested vegetation types, structural diversity of both forested and non-forested types, and fuels reduction. | Prescribed Burning | Burn Blocks | Always | Identifies Treatment Themes |
| **11** | The impacts of other management actions and natural disturbance events on forest structure stage distribution within each 5th code HUC would be considered when developing treatments. | Identifying locations of prescribed burning | 5$^{th}$ code HUC where burn blocks are located | Always | Caribou Revised Forest Plan standards and guidelines. |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **12** | Treatments would be designed so that 40% or more of the forested habitats in each affected 5th code HUC would be in the mature or late seral forest structure stage at any time. Of which, 20% of the mature or late seral forest structure stage will be in blocks greater than 200 acres in size unless the natural patch size is smaller. | Identifying locations of prescribed burning | 5th code HUC where burn blocks are located | Always | Caribou Revised Forest Plan standards and guidelines |
| **13** | Treatments would be designed so no more than 20% of the forested habitats in a HUC is converted to a seedling/sapling condition per decade, conversion of more than 20% may occur within the treatment block. | Prescribed burning | 5th code HUC where burn blocks are located | Always | Caribou Revised Forest Plan |
| **14** | Burn plans would be developed in compliance with Interagency Prescribed Fire Planning and Implementation Procedures Guide (2017). Burn plans would obtain appropriate clearances for all applicable resources of concern for the units and areas they apply. | Implementation | Specific Burn Locations | Always | Interagency prescribed fire guidelines |
| **15** | Prescribed burn treatments in Retention & Partial Retention Visual Quality Objective (VQO) areas would be designed to mimic natural burn events to create a mosaic appearance. Additional implementation guidelines would be developed to meet VQO when burn units are developed. | Prescribed Burning | Specific burn locations with a Visual Quality Objective of Retention or Partial Retention. | Always | Maintain scenic values in accordance with Caribou Revised Forest Plan |
| **16** | Blend fuel breaks with natural landscape features such as natural openings, rock outcrops, and topography where possible. Minimize use of straight lines or geometric shapes along edges during unit design where feasibility and safety allow. Once management activities are complete, rehabilitate fire control features, safety zones, and staging areas. Methods may include: returning to original contours, installing erosion control features, scarifying to eliminate compaction and/or blocking access with naturalistic barriers. | Fireline construction | Specific Burn Locations | Always | Maintain scenic values in accordance withCaribou RevisedForest Plan |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **17** | Avoid using the Lander Cutoff trail for fireline unless no other viable alternatives exist. If trails must be used, treat both sides of the trail (fuel break). Construct handline only within the immediate foreground (300 feet or visual sight distance if less) of the trails listed above. | Fireline construction and prescribed burning | Along the Lander Cutoff trails | Always | To maintain scenic and historic values in accordance with the intent of the National Trails System Act and Caribou Revised Forest Plan |
| **18** | Align prescribed burn boundaries with naturally occurring features such as ridgelines and drainage bottoms to the maximum extent possible. | Prescribed burning and fire line construction | All | Always | Maintain scenic values in accordance with Caribou Revised Forest Plan |
| **19** | Before initiating prescribed fire treatments, team members would develop specific design mitigations for scenic impacts to high-potential sites and segments of National Historic Trails. Sites would be within the foreground, middle ground or background viewing distances of burn blocks and treatments. | Prescribed Burnings | From specific known sites with views of burn locations; and high-potential sites with views of burn locations. | When significant viewpoints offer unobstructed views of burn areas; or, when high-potential segments and sites on National Historic Trails offer unobstructed views of burn areas. | Maintain the scenic values in accordance with Caribou Revised Forest Plan and scenic objectives of National Scenic Trails as defined in the Comprehensive Management and Use Plan for the Oregon and California National Historic Trails |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **20** | Before initiating prescribed fire treatments, team members would develop specific design mitigations for recreation access to high-potential sites and segments of National Historic Trails. Sites would be within the foreground, middle ground or background viewing distances of burn blocks and treatments. | Prescribed burns | Trails providing recreation access to NHTs. | When Rx fire treatments reduce recreation access to NHTs. | Maintain the recreation objectives of National Scenic Trails as defined in the Comprehensive Management and Use Plan for the Oregon and California National Historic Trails. |
| **21** | No pre-treatment activities (slashing, hand thinning or mastication) would occur in either Wild Land Recreation or Primitive themes in the Caribou City, Meade Peak, or Stump Creek roadless areas. However, incidental cutting of small diameter trees and limbing of larger trees would only occur for fire line construction. | Pre-treatment activities including slashing, hand thinning, and mastication. | Within Idaho Roadless themes of Wild Land Recreation and Primitive | Always | Demonstrate that prescribed burning and associated activities are compliant with the Idaho Roadless Rule. |
| **22** | Prescribed burning would not be applied to any previously harvested stands, unless burning would meet an objective determined by the silviculturist and associated silvicultural prescription. | Prescribed Burning | Previously Harvested Areas | Always | Protect past investments |
| **23** | Prescribed burning would not be applied, to forested stands outside of Idaho Roadless Rule Management Themes that are mechanically accessible and economically feasible to harvest with current technology and markets. | Prescribed Burning | Forested Stands outside of Idaho Roadless management theme | Always | Value of the timber for wood production receives consideration prior to the use of fire |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **24** | Prescribed burning will not be applied, to forested stands within the Idaho Roadless Rule Management Theme of General Forest, Rangeland, and Grassland that are mechanically accessible and economically feasible to harvest with current technology and markets. | Prescribed Burning | Forested Stand within the Idaho Roadless management theme of General Forest, Rangeland, and Grassland | Always | Value of the timber for wood production receives consideration prior to the use of fire |
| **25** | Prescribed burning will not target any forested stand identified as currently meeting or being actively managed to attain old growth characteristics | Prescribed Burning | Within Burn Blocks or Specific Burn Locations | Always | Project-specific |
| **26** | Prescribed Fire may be applied to stands identified in the Forest GIS database as tentatively planned to be managed to attain old-growth characteristics, if the prescribed fire treatment is designed to enhance old growth characteristics. If prescribed fire is not expected to enhance old growth characteristics, “tentative” stands will not be targeted for treatment (e.g. no active ignition will occur). If fire enters stands and potential to attain old-growth characteristics is reduced, replacement stands will be delineated. If watershed has limited replacement acres, “tentative” stands will be protected from prescribed fire treatments. | Prescribed Burning | Within Burn Blocks or Specific Burn Locations | Always | Project-specific |
| **27** | Burn areas will be monitored for five years following implementation. This monitoring would include but is not limited to: tree regeneration surveys, tree condition survival and mortality, herbivory by ungulates, noxious weeds, and livestock movements and utilization. | Prescribed Burning | Specific Burn Locations | Always | Project-specific |
| **28** | During project implementation, project personnel would report any active nest/den found to the district wildlife biologist who would then review the status of the nest/den and, in coordination with the project leader and District Ranger, determine the most appropriate course of action to protect the nest/den as per Revised Forest Pplan guidance and best available science (expected to consist of delayed project implementation or buffer). | Prescribed burning and associated activities | All nest/den sites | Always | Caribou Revised Forest Plan |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **29** | Survey for the presence of sensitive species if suitable habitats are found within a burn location at minimum of once prior to burn plan development. | Prescribed burning and associated activities | Suitable habitat | Always | Caribou Revised Forest Plan |
| **30** | During project implementation, avoidance areas identified in the Revised Forest Plan or specialist report for sensitive species, threatened, endangered, proposed or candidate species, and other species of concern, will be incorporated into the burn plan. | Prescribed burning and associated activities | Avoidance areas identified by specialists | Always | Endangered Species Act and Forest Service sensitive species policies |
| **31** | Prior to treatments surveys will be conducted for active sage-grouse leks and associated habitat, including wintering locations. If identified, additional analysis will be conducted to design treatments to comply with the Revised Forest Plan and the standards and guidelines in the 2015 sage-grouse amendment. | Prescribed burning and associated activities. | Potential habitat for the greater sage-grouse. | Always | Caribou Revised Forest Plan, 2015 Sage-grouse Forest plan Amendment, and Forest Service sensitive species policy |
| **32** | Prior to project implementation, site-specific heritage surveys will be conducted and historic (National Register of Historic Places eligible/historically significant) properties or sites will be avoided or protected during project implementation. | Prescribed burning | Everywhere | Always | National Historic Preservation Act |
| **33** | Project activities will be halted if cultural resources are discovered until an archaeologist can properly evaluate the resources. | Prescribed burning and associated activities | Specific Burn Locations | Always | National Historic Preservation Act and 36 CFR 800 |
| **34** | Structural range improvements (fences, water developments, pipelines, corrals) will be protected. | Prescribed burning | Specific Burn Locations within an active grazing allotment | As needed | Protect Range Improvements |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **35** | Incorporate weed prevention and control into project layout and design. | Prescribed Burning | Specific Burn Locations | Always | Invasive species best management practices (R4FSM 2080) |
| **36** | To prevent new weed infestations and the spread of existing weeds, avoid or remove sources of weed seed and propagules or manage fire as an aid in control of weeds. This can include but is not limited to washing and cleaning of fire equipment before it enters and when it leaves proposed burn areas. | Prescribed burning and associated activities | Specific Burn Locations | Always | Invasive species best management practices (R4FSM 2080) |
| **37** | Known locations of sensitive or Endangered Species Act listed plant species would be protected from mechanical equipment use, constructed fireline, pile burning, jackpot burning, and negative impacts from prescribed fire within treatment areas. However, prescribed burning treatments and hand thinning activities could be implemented within populations of fire adapted sensitive plant species. | Prescribed burning and associated activities | Areas with sensitive plants | Always | Endangered Species Act, Sensitive species polices |
| **38** | Prescribed fire within Aquatic Influence Zones (AIZs) is encouraged when such treatments are beneficial to the AIZ and desired conditions as described in the Revised Forest Plan are maintained or improved. | Prescribed Burning | Within Aquatic Influence Zones | Always | Project-specific |
| **39** | Prescribed fire within AIZs should have a target of low soil burn severity to maintain organic ground cover. | Prescribed Burning | Within Aquatic Influence Zones | Always | Project-specific |
| **40** | Apply prescribed fire to minimize fire intensity in draws and ephemeral drainages with a target burn area of 50% or less in these areas. | Prescribed Burning | Within draws and ephemeral drainages | Always | Project-specific |
| **41** | Intake hoses drawing from fish bearing streams should have a screen size no larger than 3/32” | Prescribed Burning | Burn Block | Always | Project-specific |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **42** | Minimize fireline construction in or around riparian areas, wetlands or areas highly prone to erosion unless needed to protect life, property or wetlands or approved by Fisheries Biologist, Hydrologist or Soil Scientist.<br>• No mechanized fireline construction within 50' of streams or wetlands without consulting with the hydrologist or fisheries biologist.<br>• Avoid continuous fireline straight downslope within 150' of water. Rehab any unavoidable fireline as directed by hydrologist or fisheries biologist.<br>Rehab and make un-travelable all firelines within 150' of water that could become new livestock trails | Fireline construction | Burn Blocks | Always | Project-specific |
| **43** | Minimize effects on soil, water quality, and riparian resources by appropriately planning pile size, fuel piece size limits, and spacing piling and pile burning may occur in the AIZ if no other practicable alternative exists consult with hydrologist, fisheries biologist, or soil scientist. | Pre-Treatment Activities | Burn Block | Always | FS-990a Fire-2 Use of Prescribed Fire |
| **44** | When scattering or piling slash in prescribed fire areas avoid placing material in draws and ephemeral drainages. | Pre-Treatment Activities | Burn Block | Always | Project-specific |
| **45** | Mastication and mechanical treatment in the AIZ will be conducted so that the rotatory head does not disturb the soil, rather it mulches and spreads the targeted vegetation | Pre-Treatment Activities | Burn Block | Always | Project-specific |
| **46** | Pre-treatment mastication activities would be limited to slopes less than 20%.<br>• Whenever practical, minimize turning of mastication equipment or attempt a "rolling turn" to reduce the amount of displacement and topsoil mixing with an emphasis on operating over the top of masticated fuels to decrease compaction<br>• Plan mastication operations to minimize the number of passes over any one area to reduce the potential for compaction and rutting<br>Avoid pre-treatment mastication activities is soil is wet (near saturation) to decrease the potential for deep rutting | Pre-Treatment Activities | Burn Block | Always | Project-specific |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **47** | Design burn prescriptions to achieve a low to moderate soil burn severity as defined below:<br>**Low Severity** - Surface organic layers are not completely consumed and are still recognizable. Soil structure is not changed from its unburned condition, and roots are generally unchanged. The ground surface, and any exposed mineral soil, may appear brown or black (lightly charred). Canopy would likely appear green or brown.<br>**Moderate Severity** - Up to 80 percent of the pre-fire ground cover (litter and ground fuels) may be consumed or charred, but still recognizable in areas. Fine roots may be scorched but are still viable. Surface ash is patchy and generally gray to black. Soil structure is generally unchanged. | Prescribed Burning | Specific Burn Locations | Always | Project-specific |
| **48** | Construct fireline to the minimum size and standard necessary to contain the prescribed fire and meet overall project objectives. Consider alternatives to ground-disturbing fireline construction such as using wet lines, rock outcrops, or other suitable features for firelines | Fireline Construction | Specific Burn Locations | Always | C-T Wildland Fire Guidebook MIMT, PMS 313 MIST, & FS-990a |
| **49** | If slash is chipped and the chips remain in the activity area, the depth of the chips would not exceed three inches. | Prescribed burning and associated activities | Specific Burn Locations | Always | Joint Fire Science Program - Fire Science Brief 06-3-2-26 |
| **50** | When using water for fire suppression and other activities follow PMS 444 Guide to preventing aquatic invasive species Transport by wildland fire operations. | Prescribed Burning | Burn Blocks | Always | National Wildfire Coordinating Group |
| **51** | Caribou Forest personnel will annually report out on planned prescribed burn activities to the public and partner agencies as part of the implementation process. | Prescribed burning | Accomplished and planned burn locations | Annually | Supplement public engagement and notification of partner agencies. |

| Design Element Number | Design Element | Activity *Which activity needs to be modified?* | Where? *What is the applicable area (geographic features, forest types, management areas, etc.)?* | When? *Is there a specific time that this does or does not apply?* | Why? *Purpose, source, or reference* |
|---|---|---|---|---|---|
| **52** | Grazing permittees shall be notified of the annual proposed treatment actions, and identified grazing restricted areas, at least one grazing season prior to prescribed fire activities. | Prescribed burning | Grazing allotments | Annual operating meetings | Coordination with range staff and permittees |
| **53** | Livestock grazing shall be restricted within a burned area until management objectives are met or seed set of the second growing seasons following prescribed fire activities (i.e. underburning, jackpot, or broadcast burning). Restriction shall be accomplished through grazing management action such as herding, salting, season of use, or temporary fencing. | Livestock grazing | Treated areas | Until vegetation management objections are met following prescribed burn activities. | Caribou Revised Forest Plan |
| **54** | Prescribed burning would not occur in consecutive years within the same allotment, nor would all pastures of one allotment be burned in one year. Prescribed burning activities would be rotated between allotments and pastures to reduce impacts to allotment management. | Prescribed burning | Grazing allotments | Always | Coordination with grazing permittees |
| **55** | Outfitters and guides will be made aware of the annual proposed burn areas at least one operating season prior to burning. | Prescribed burning | Permit operating area | Yearly | Coordination with outfitters and guides |

# APPENDIX 2 – IMPLEMENTATION CHECKLIST

This checklist broadly ensures that the interdisciplinary team and responsible official would select areas for prescribed fire (and other pre-treatment actions), apply the project design elements, and implement the activities consistent with the project decision notice. The steps shown would take place prior to project implementation.

**1. BURN LOCATIONS/OUT YEAR PLANS**

Identify mapped locations of prescribed burning and preliminary locations for pre-treatment activities and preliminary methods, as part of annual interdisciplinary out-year/unit strategic planning:

a. Review current conditions and trends (field inventory if necessary), consider desired conditions from the Revised Forest Plan (as amended), as well as the project purpose and need. Coordination with silvicultural/vegetation management and range management activities, schedules, and needs.

b. External consultation and collaboration:

   i. Tribal consultation (quarterly forums or other venue) to identify potential locations for cultural burning or historic properties with traditional religious and cultural significance.

   ii. Early coordination with permittees (including grazing, outfitters and guides, and special use permits) and permit administrators to consider impacts to approved uses.

   iii. Notification of the public of planned treatment areas (as identified in design elements).

   iv. Notify U.S. Fish and Wildlife Service of planned treatment areas.

c. **Line officer approves:** Areas selected in out-year planning are consistent with the decision, address the purpose and need, and meet acreage limitations.

**2. INTERDISCIPLINARY COORDINATION AT THE SPECIFIC BURN AREA:**

a. Resource specialists determine if site-specific burn proposal is within the scope of the activities evaluated in the analysis.

b. Silviculturist or forest vegetation staff would evaluate proposed treatment locations and would provide the following:

   i. An assessment of the impacts of other management actions and natural disturbance events on forest structure stage distribution within the affected 5th code HUC.

   ii. Identify any forest stands that meet old growth characteristics.

   iii. Site-specific objectives for forested stands outlined in a silvicultural prescription prior to development of the burn plan.

c. Range management staff would evaluate proposed treatment locations and provide the following:

   i. An assessment of the impacts of other management actions and natural disturbance events on non-forested composition and structure within the affected 5th code HUC.

   ii. Site-specific objectives for non-forested stands outlined in a vegetation prescription prior to development of the burn plan.

   iii. Risk assessment for invasive plants

d. Resource specialists review data and identify survey or field assessment needs:

   i. Archeologist identify area of potential effect, determine need for surveys (adequacy of existing surveys, location and intensity of new survey), prepare inventory of resources.

ii. Botanist review existing data and determine whether to conduct surveys. When needed, botanical clearances would be completed before implementation occurs. Identify areas where there is a risk of introducing, establishing, or spreading invasive weed species.

iii. Wildlife and aquatic biologist review sensitive species habitats, threatened and endangered species habitats, and determine if surveys are warranted.

e. Resource specialists determine which design elements are applicable and determine if additional site-specific design elements are needed. These will include, but are not limited to the following:

i. Review proposed burn area and identify measures that will be taken to meet the Greater Sage Grouse Amendment, Migratory Bird Treaty Act, and other agency policy.

ii. Recreation specialists would review proposed locations and:

- Identify if inventoried roadless areas or recommended wilderness areas are included in the proposed burn area. If so, the district ranger will coordinate with the forest roadless coordinator to provide a summary of proposed activities in inventoried roadless areas to the R4 Idaho roadless area coordinator. The materials provided will identify the roadless areas where treatment is proposed and acres of treatment by theme identified in the Idaho Roadless Areas.
- Identify if proposed units overlap with portions of any National Historic Trail or Scenic Byway. Ensure appropriate considerations are taken to protect the nature and purpose of the trail and that the burn area is designed to meet visual quality objectives identified in Caribou Revised Forest Plan.
- Identify if any viewpoints identified in the initial analysis offer unobstructed views of proposed burn units in the middle- or background distances. If so, determine what design elements or treatment methods, if any, can reduce the impact and duration of burn operations on these landscape views to comply with the visual quality objectives identified in Caribou Revised Forest Plan.

iii. Forest aquatics staff will review and provide feedback on the following:

- The existing percentage of acres in a principal watershed or subwatershed that are in a hydrologically disturbed condition and what percentage of the watershed can be affected by this action and continue to meet Revised Forest Plan guidelines.
- If burn areas include waters designated as “water quality limited” (Clean Water Act Section 303(d)), ensure that proposed activities would not contribute to further degradation of water quality. Execute applicable elements of completed total maximum daily load (TMDL) implementation plans.
- Soil scientist would review proposed project area to identify landslides or landslide prone areas, unstable areas, and review soil data to ensure the soil is capable of sustaining impacts of prescribed fire so site productivity is sustained.
- Hydrologist, fish biologist, or soil scientist would review proposed project area to identify riparian resources and aquatic influence zones (AIZ).

iv. Archeologist provide specific protection measures for fire-sensitive historic properties within the area of potential effect and ensure that historic property boundaries will be flagged by a qualified archaeologist prior to implementation.

f. **Line officer approves:** Reviews and approves interdisciplinary team’s recommended modifications due to burn-specific analyses and/or application of design elements.

**3. NOTIFICATIONS AND CONSULTATIONS:**

a. Ongoing tribal consultation.

b. Prior to implementation, consultation with associated regulatory agencies will occur, consistent with programmatic agreements or other consultation procedures to be developed further through early consultation.

   i. U.S. Fish and Wildlife Service - Notify the U.S. Fish and Wildlife Service of planned treatment units, consistent with project concurrence (in development).

   ii. Idaho State Historic Preservation Office.

   iii. Local air quality permitting actions; Smoke Management Plan approval.

c. Notification to public.

d. Notification to permittees (range, utilities, outfitters and guides, etc.).

e. Range management staff would review and provide feedback on the following:

   i. Coordinate prescribed burning with the grazing schedule.

   ii. Coordination between the burn boss and grazing permit administrator to ensure that adequate fuels are available prior to burning.

   iii. Grazing permit administrator must inform the burn boss of any changes in the grazing rotation schedule.

**4. PREPARE AND APPROVE BURN PLAN(S):**

Prepare burn plans consistent with Interagency Prescribed Fire Planning and Implementation Procedures Guide:

a. Ensure methods proposed are consistent with decision (pre-treatment activities and prescribed burn type).

b. Incorporate objectives from the purpose and need stated in the NEPA document.

c. Incorporate all relevant design elements as adopted by the decision notice.

d. **Line officer approves:** Burn plans are consistent with National Environmental Policy Act decision by:

   i. Addressing need for action.

   ii. Meeting annual acre limitations.

   iii. Conducting interdisciplinary coordination (review of burn plan and design elements are applied).

   iv. Completing required consultations.

   v. Ensuring consistency with anticipated effects identified in the National Environmental Policy Act analysis.

**5. IMPLEMENTATION:**

a. Notifications to tribes, air pollution control board, permittees, advance public notice of activities, signage at recreation areas.

b. Sensitive resource briefing to all involved/working on the ground during implementation.

c. Address hazards/safety mitigation.

d. Conduct any required pre-treatment activities (as part of design elements for sensitive resources).

e. Receive daily authorization from Air Pollution Control District.

f. Ensure best management practices are in place.

g. **Line officer approves:** Implement prescribed burn.

**6. MONITORING.**

a. Burn areas will be monitored for five years following implementation. This monitoring would include but is not limited to:

i. Tree regeneration surveys, tree condition survival and mortality

ii. Herbivory by ungulates

iii. Livestock movements and utilization.

iv. Best management practices implementation and effectiveness monitoring.

v. Monitoring and treatment of invading plant species.

# GLOSSARY

**Backburn/Backing fire:** Used in some localities to specify fire set to spread against the wind in prescribed burning (NWCG).

**Broadcast burning:** A type of prescribed fire that uses surface fire on a broad area of a burn unit, often when no overstory trees are present. In some instances, broadcast burning is used to remove overstory vegetation to create openings and optimal conditions for regenerating vegetation.

**Burn block:** A discrete area within a larger prescribed or fire use project (NWCG).

**Burn plan**: *See Prescribed Fire Burn Plan*

**Burn prescription**: The prescription is the measurable criteria during which a prescribed fire may be ignited to meet the prescribed fire objectives. The prescription will describe a range of low-to-high limits for the environmental (temperature, relative humidity) or fire behavior (flame length) parameters (or both) required to meet prescribed fire objectives. (NWCG)

**Condition class:** *See also Vegetation Condition Class;* Depiction of the degree of departure from historical fire regimes, possibly resulting in alterations of key ecosystem components. These classes categorize and describe vegetation composition and structure conditions that currently exist inside the Fire Regime Groups. Based on the coarse-scale national data, they serve as generalized wildfire rankings. The risk of loss of key ecosystem components from wildfires increases from Condition Class 1 (lowest risk) to Condition Class 3 (highest risk). (NWCG)

**Controlled burn:** *See Prescribed fire*

**Departure:** the amount that current vegetation has departed from simulated historical vegetation reference conditions (NWCG)

**Fire effects:** The physical, biological, and ecological impacts of fire on the environment (NWCG).

**Fire intensity:** the amount of energy produced by a fire at the flaming front, often described by flame height (NWCG).

**Fire regime:** Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects as well, in a given area or ecosystem. A fire regime is a generalization based on fire histories at individual sites. Fire regimes can often be described as cycles because some parts of the histories usually get repeated, and the repetitions can be counted and measured, such as fire return interval. (NWCG)

**Fire regime condition class (FRCC):** *See condition class and vegetation condition class*

**Fire return interval:** The Fire Return Interval (FRI) quantifies the average period between fires under the presumed historical fire regime. The mean fire-return interval (MFRI) is defined as the statistical average of all fire intervals in each individual sample and is calculated by recording the number of annual growth rings between each fire scar, summing the intervals, and then dividing this result by the total number of intervals. (LANDFIRE).

**Fire risk:** The chance of fire starting, as determined by the presence and activity of causative agents (NWCG).

**Fire severity:** In FRCC methodology, this is the effect of fire in terms of upper layer canopy replacement (mortality). Replacement may or may not cause a lethal effect on the plants. For example, replacement fire in grassland simply removes the leaves, which usually resprout from the basal crown; whereas replacement fire in most conifers causes total tree mortality. Severity Class: No Fire Effects less than 5 percent replacement; Low 6-25 percent replacement; Mixed 26-75 percent replacement; Replacement greater than 75 percent replacement (FRCC Guidebook).

Degree to which a site has been altered or disrupted by fire; loosely, a product of fire intensity and residence time. (NWCG)

A qualitative assessment of the heat pulse directed toward the ground during a fire. Burn severity relates to soil heating, large fuel and duff consumption, consumption of the litter and organic layer beneath trees and isolated shrubs, and mortality of buried plant parts. (NWCG)

**Fire treatment**: The use of fire to accomplish a specified objective. (NWCG)

**Jackpot burning**: A fire treatment type. A prescribed fire to deliberately burn natural or modified concentrations (jackpots) of wildland fuels under specified environmental conditions, which allows the fire to be confined to a predetermined area and produces the fireline intensity and rate of spread required to attain planned resource management objectives. (NWCG)

**Low-severity fire:** Any surface fire replacing less than 25 percent of the dominant upper canopy layer in a succession class; as a result, low severity fires can open or maintain a given succession class. (FRCC Guidebook)

**Natural disturbance**: Natural disturbances include fires, insect outbreaks, disease epidemics, droughts, floods, hurricanes, windstorms, landslides, avalanches, and volcanic eruptions. In terms of frequency and area affected, the two major natural disturbances affecting Forest Service landscapes are fire and insect outbreaks. These two natural disturbance regimes are responsible for much of the variation we see in vegetation structure and composition. (Source Aldo Leopold Wilderness Research Institute)

**Natural fire regime**: The reference fire regime that is operating in the absence of modern human interference. Natural fire regimes can include anthropogenic influences, such as American Indian fire use, that may have contributed to the development of native species' fire adaptations (Source FRCC Guidebook).

**Pile burning**: Prescribed fire that burns discrete piles of fuels with some surface fire allowed to spread between them.

**Prescribed fire**: Prescribed fires, also known as prescribed burns or controlled burns, refer to the controlled application of fire by a team of fire experts under specified weather conditions to restore health to ecosystems that depend on fire. (NWCG)

**Prescribed fire burn plan:** A plan required for each fire application ignited by management. Plans are documents prepared by qualified personnel, approved by the agency administrator, and include criteria for the conditions under which the fire will be conducted (a prescription). [Interagency Prescribed Fire Planning and Implementation Procedures Guide (nwcg.gov)].

**Resiliency:** At a general level used to refer to the ability of a system (ecological or human) to resist damage and recover from a disturbance. In ecology, resiliency tends to refer to the ability of the system to return to the pre disturbance state with no assessment of whether that state is desirable or not. From a social perspective, resilience may reference ability to return to the original state but also can refer to the ability to recover to a state more likely to resist or recover quickly from future disturbance. (NWCG)

**Understory burn:** (also underburning); a kind of prescribed fire used to reduce ladder fuels in key locations in order to remove surface fuels but not all of the overstory vegetation.

**Values at Risk:** The elements of a community or natural area considered valuable by an individual or community that could be negatively impacted by a wildfire or wildfire operations. These values can vary by community and can include diverse characteristics such as homes, specific structures, water supply, power grids, natural and cultural resources, community infrastructure, and other economic, environmental, and social values.

**Vegetation condition class (LANDFIRE):**

| Vegetation Condition Class | Description | Potential Risks |
|---|---|---|
| I.A Very Low, Vegetation Departure 0-16 percent | Within the natural (historical) range of variability of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances. | Fire behavior, effects, and other associated disturbances are similar to those that occurred prior to fire exclusion (suppression) etc. Composition and structure of vegetation and fuels are similar to the natural (historical) regime. Risk of loss of key ecosystem components are low. |
| I.B Low to Moderate, Vegetation Departure 17-33 percent | | |
| II.A Moderate to Low, Vegetation Departure 34-50 percent | Moderate departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances. | Fire behavior, effects, and other associated disturbances are moderately departed (more or less severe). Composition and structure of vegetation and fuel are moderately altered. Risk of loss of key ecosystem components are moderate. |
| II.B Moderate to High, Vegetation Departure 51-66 percent | | |
| III.A High, Vegetation Departure 67-83 percent | High departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances. | Fire behavior, effects, and other associated disturbances are highly departed (more or less severe). Composition and structure of vegetation and fuel are highly altered. Risk of loss of key ecosystem components are high. |
| III.B Very High, Vegetation Departure 84-100 percent | | |
| NB | NB = Non-Burnable (includes barren, water, sparse vegetation) | NA |

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