Payette National Forest
Resilience and Fuels Reduction Prescribed Fire Project

Introduction

Fire is a natural ecosystem process in the Payette National Forest – it has shaped ecosystem composition, structure, and function. Currently, the Forest is treating 2,000 to 7,000 acres per year with noncommercial fuels treatments, 1,000 to 2,500 acres per year of commercial treatments (footprint acres) and 12,000 to 15,000 acres of prescribed fire a year. There are over 2.297 million burnable acres on the Payette National Forest that can be characterized as being moderately or very highly departed from their historic fire regime and are therefore at a considerable risk of losing key ecosystem components (LANDFIRE 2016). Key ecosystem components are at risk within several vegetation systems including ponderosa pine, lodgepole pine, aspen, mixed conifer, and spruce-fir forests. Therefore, we are proposing to increase the pace and scale of prescribed burning to increase resiliency of existing vegetation groups, restore proper ecological function to native vegetation communities and wildlife habitats, and improve firefighter and public safety.

Purpose, Need, and Objectives

On the Payette National Forest, fire-dependent vegetation communities include ponderosa pine, lodgepole pine, aspen, mixed conifer, and spruce-fir forests. Wildfire and prescribed burning of varying intensities historically has thinned vegetation and limited fuel loading in a historic fire regime. Throughout the 20th century, human activities, including fire suppression, mining, agriculture, introduction of infrastructure, invasive species, timber harvesting, and livestock grazing, has altered this natural fire regime. The Payette National Forest has experienced insect activities primarily in conifer that increased the amount of dead and dying fuels throughout the Forest. Without regular wildfire, stand composition and structure has been altered and fuel loading has increased resulting in the size and severity of wildfires to increase. Reduced winter precipitation, earlier spring snowmelt, warmer temperatures and longer summer dry seasons have played a role in lengthening fire seasons.

Recently, several large wildfires have burned on and around the Payette National Forest with increasing frequency, size, and cost. Large wildfires often carry serious risks for firefighter and public safety during the fire as well as varying levels of environmental and financial impacts to communities following the fire. The current trend is more frequent, larger, and costlier fires across the region due to the conditions listed above. Table 1 shows large fires since 1994.

Risks to communities and natural resources are expanding and the environment is increasingly more dangerous for firefighters. Encroachment of trees into areas that historically were more open are also impacting habitats for species such as mule deer, and elk. In other areas the increased density of trees and brush is limiting movement and forage growth for species.

Table 1. Large wildfires 1994 to 2022

Year	Fire Name	Acres
1994	Chicken Complex	107,945
1994	Corral creek	118,025
1994	Blackwell	55,548
2000	Burgdorf Junction	64,613
2006	Cougar	28,446
2007	Cascade complex	174,234
2007	Raines	78,587
2007	Vena/loon	215,393
2007	Greys Creek	24,071
2012	Weasley	16,418
2013	Raft	20,351
2013	Hells Canyon	9,060
2015	Teepee	96,230
2015	Rapid	10,063
2018	Mesa	34,700
2020	Woodhead	96,535
2020	Porphyry	14,537

*Large fires are categorized as fires greater than 9000 acres

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. Management actions, such as prescribed fire and intermediate stand improvements can increase the amount of low to moderate intensity burning consistent with the natural fire regime in these fire-adapted ecosystems and habitats and help to increase resiliency in these ecosystems to improve vegetation and habitat into the future. In addition, in the long term, this type of low to moderate intensity fire could reduce the amount of large, high severity fires. Papers that support the need to use prescribed fire to address the needs previously identified include the Forest Carbon Assessment for the Payette National Forest, Intermountain Region White Paper by Dustin Bambrough, Duncan McKinley, and Jessica Halofsky 2020.

Additionally, this project's purpose is to improve ecosystem health, function, and increase resilience to wildfire in an environment that is seeing warmer temperatures, drier conditions, and longer fire seasons. These changing climate conditions affect the extent and severity of fires, and can impede fire dependent ecosystem recovery, potentially leading to a loss of key ecosystem components.

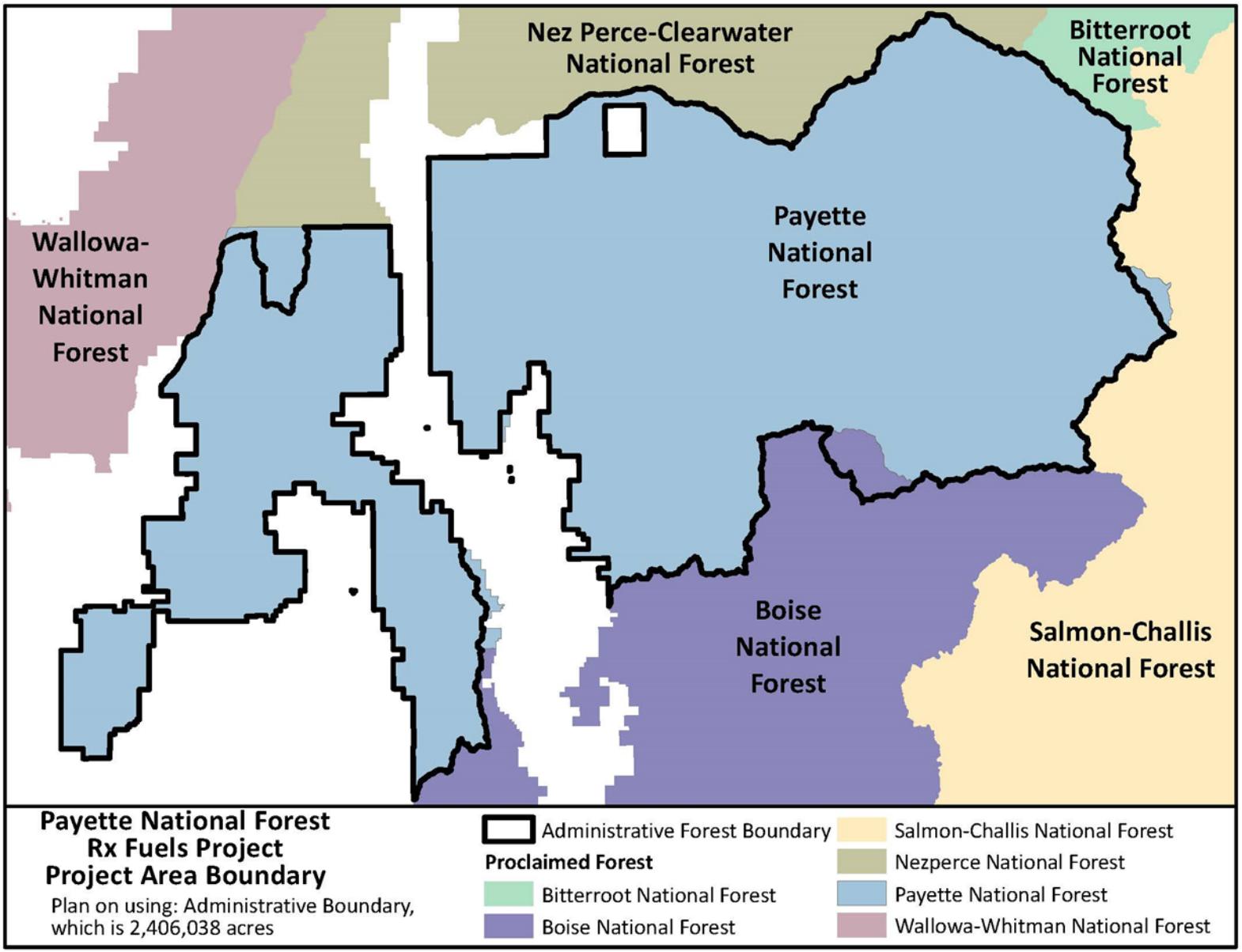

Figure 1. Vicinity map showing the Forest administrative boundary as the project area boundary

Need for the Project

Prescribed fire is needed to restore health and resiliency to vegetation communities on the Payette National Forest to meet the following purposes:

- Restore ecological function of vegetative communities.
- Improve ecosystem health and wildlife habitat.
- Increase resiliency of existing vegetation communities by modifying stand structure and composition which brings these into closer alignment with historical conditions.
- Reduce ladder fuels that provide vertical and horizontal fuel continuity and thereby reduce crown fire risk.
- Increase canopy base heights and crown spacing in order to reduce the risk of crown fire.
- Reduce the risk of uncharacteristic wildfire by modifying fuel accumulation.
- Improve firefighter and public safety.
- Reduce, to an acceptable level, the risks and consequences of wildfire escaping from wilderness, and allow more opportunities to safely use wildfire in wilderness to meet wilderness fire management objectives.

There is a need to move ecosystems towards increased resiliency by reducing fuels and creating a more diverse landscape, which would also reduce the likelihood of large, catastrophic wildfires. Long-term fire suppression and historic management practices and activities have left much of the vegetation composition and fuels conditions departed from desired conditions, with increased stand densities, across the Payette National Forest. There is also a need to identify and conduct prescribed fire in vegetative (vegetation) communities most in need of restoration. There is opportunity and evidence to support the use of more management-ignited fire on the landscape to move conditions toward historic fire regimes in the different ecosystems and vegetation types on the forest. Using prescribed burning, we can improve firefighter and public safety, improve stand conditions, reduce fuel accumulations, improve watershed conditions and improve habitat for wildlife.

Designated wilderness was excluded from the project area because wilderness is intended to be dominated by natural processes. To preserve wilderness character, not suppressing naturally occurring wildfires within designated wilderness is a desired management strategy. However, the extent to which this can occur is often limited by the potential risk of wildfires spreading toward adjacent lands that are developed or where wildfire may pose a risk to natural resource values that would not respond positively to fire. By increasing the use of prescribed fire adjacent to designated wilderness, the Forest can better manage wildfires that may occur within wilderness boundaries. This would allow natural fire to occur more readily, providing reduced risk to communities and adjacent lands.

Desired Condition

The land and resource management plan (forest plan) for the Payette National Forest recognizes the need for prescribed fire on the landscape to protect infrastructure values as well as ecological processes. Increased use of prescribed fire would move conditions on the ground toward desired conditions as specified in the forest plan:

- Desired conditions for tree class sapling, small, medium, and large tree size (forest plan appendix A, table A-2)
- Fire Management Goal (FMGO) 06 (Encourage and participate in partnerships with citizens or community-centered approaches to manage fire risks and hazards in wildland/urban interface areas)
- Fire Management Objective 07 (Coordinate vegetation management activities and partnership opportunities with local land managers and owners for wildland fire suppression and use, and prescribed fire)
- The National Cohesive Strategy and Shared Stewardship
- Protect values at risk
    - FMGO05: Provide for protection of life, investments, and valuable resources through appropriate vegetation, fuel, and wildland fire management.
- Resilience to insects, disease, and fire
    - FMGO03: Use fire alone or with other management activities to restore or maintain desirable plant community attributes including fuel levels, as well as ecological processes.
    - VEGO01: Maintain or restore desired plant community components, including species composition, size classes, canopy closures, structure, snags, and coarse woody debris as described in appendix A.
    - VEGO02: Maintain or restore vegetative conditions as described in appendix A to provide for ecological processes, including disturbance regimes, soil-hydrological processes, nutrient cycles, and biotic interactions.
    - VEGO03: Maintain or restore vegetation conditions as described in appendix A to reduce frequency, extent, severity, and intensity of uncharacteristic or undesirable disturbances such as fire, insects, and pathogens.
- Restore fire regimes
    - FMGO03: Use fire alone or with other management activities to restore or maintain desirable plant community attributes including fuel levels, as well as ecological processes.
    - FMOB04: Schedule and complete at least 100,000 acres of fuels management through prescribed fire and mechanical treatments in the next decade to achieve desired vegetation attributes and fuel reduction goals. Focus on wildland/urban interface and areas in fire regimes 1, 2, and 3 (nonlethal, mixed1, mixed2) in condition classes 2 and 3 (moderate to extreme hazard rating).

Methodology for Determining Need for Change

LANDFIRE datasets and models were used to evaluate vegetation condition class data and to identify major departures from historical (pre-settlement) fire regimes (LANDFIRE 2016, National Interagency Fuels, Fire, and Vegetation Technology Transfer System 2010). The LANDFIRE model for historical (pre-settlement) approximates vegetation systems that may have been dominant on the landscape prior to Euro-American settlement. Based on these models, we found that 56 percent of the 1.3-million-acre project area can be characterized as being moderately to highly departed from the historic fire regime. This means there that over half of these lands are at considerable risk of losing key ecosystem components.

The 1.3-million-acre project area is exclusive of wilderness, research natural areas, non-Forest Service inholdings, and decisions that were made previous to this analysis and intentionally omitted.

LANDFIRE models were also used to compare approximate historic mean fire return intervals as well as approximate acres burned for each vegetation type (LANDFIRE 2016). This information provides an approximation of how many acres should be targeted for prescribed burning on an annual basis in order to restore a more resilient stand composition and structure.

Through this large-scale proposal, the Forest Service would increase the efficiency of vegetation community and habitat restoration actions by identifying projects where managers could successfully re-introduce prescribed fire at the landscape scale. In addition, the scope of this project is consistent with the forest plan for which fire is encouraged to play its natural role across the landscape, and which provides direction for fire to be used to manage vegetation, where appropriate, to enhance ecosystem resiliency and lower hazardous fuels. This project addresses the use of human prescribed ignitions of fire under the optimal conditions, location, and time of year to restore communities and habitats.

Proposed Action

The proposed project (figure 2) would authorize prescribed burning, hand thinning, and mechanical thinning across the project area up to 30,000 acres a year. Project design features would be used to mitigate effects to resource areas. The proposed action does not include road construction. All treatments would be designed to meet desired conditions set forth in the Payette forest plan and follow the Payette National Forest Endangered Species Act Programmatic Consultation for Fire Management Activities (2021). Prior to the initiation of a project covered by the Payette National Forest Endangered Species Act Programmatic Biological Consultation for Fire Management Activities (2021), the Forest would submit a pre-project checklist to the Level 1 Team. If the Forest determines a project is not likely to adversely affect a species, they may use a determination key through the Service's Information for Planning and Consultation website for potential concurrence (https://ecos.fws.gov/ipac/). This proposed action does not apply to congressionally designated wilderness areas, Research Natural Areas, or select project areas considered by previous National Environmental Policy Act decisions.

Treatment areas have been identified through a coarse landscape prioritization process utilizing quantitative risk analysis that includes, infrastructure, communities, vegetation condition, hazardous fuels condition, municipal watersheds, and critical species habitat. A balance between ecological need, feasibility, wildfire risk and public safety would be considered. Before implementation, forest conditions and site-specific considerations would inform treatments that would be designed by the Forest to meet objectives and move toward desired conditions in the forest plan using the current knowledge of vegetation and habitat conditions. The size of the prescribed fires planned would vary in size (up to 15,000 acres in size) annually with smaller burn units being used where infrastructure or other high value resources and assets are present; larger burn units could be designed where the prescribed fire objectives permit. Multiple treatment entries may be required for moving vegetation and habitat characteristics toward desired conditions. The pace and scale of implementation would also be dependent upon funding and capacity. 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 treatments could be implemented year-round when weather and air-quality conditions allow the Forest to meet the objectives and desired conditions for burning.

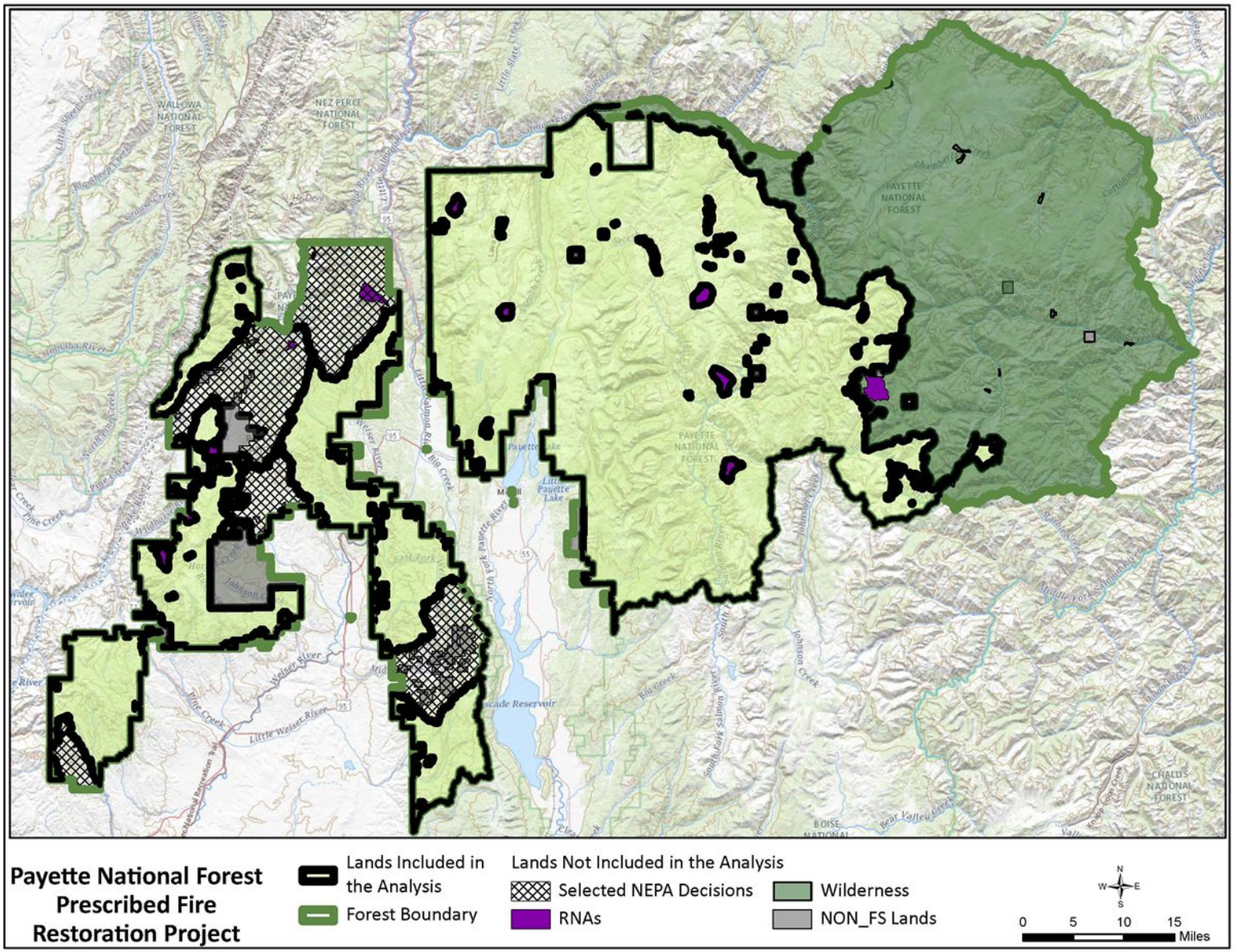

Figure 2. Proposed project

Prescribed fire would be implemented in adherence with Agency policy and direction, following the Interagency Prescribed Fire Planning and Implementation Procedures Guide (PMS-484) 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, and to achieve land-management objectives.

Within this policy and direction are legal requirements for site-specific implementation documents, otherwise known as prescribed fire burn plans. Every burn plan must address required elements, including:

- technical review and approval of an Agency Administrator;
- ignition authorization;
- a go/no-go checklist;
- a complexity analysis (PMS 424-1);
- 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 seasons 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 conditions and each burn unit size would be determined and explained prior to approval, in accordance with policy and direction for using prescribed fire treatments. The kind of fire to be used, and the amount of each type of prescribed fire to be used is explained in the burn plan.

Specific treatment areas would be identified through a hazard classification and landscape prioritization process. Prior to implementing prescribed fire, an interdisciplinary team of resources specialists would review the project. The project design features are key elements of the proposed action which help to ensure statutory and regulatory requirements would be met.

Project design features would direct specific tasks that need to occur prior to applying fire, hand thinning, or mechanical thinning in an area. Among other elements, the project design features would 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; 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 public involvement and public notices would be provided; and other specific steps that would be completed prior to applying treatment actions.

Additionally, the project design features section describes how resource conditions could limit areas or describe conditions where prescribed fire may be adjusted, limited or excluded. During implementation of the decision, other areas in addition to those mentioned above could be removed from the treatment area 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 forest plan. Those areas would be recognized and addressed through forest plan consistency as well as through specific project design features that would be adopted as part of the analysis of the proposed action (see Project Design Features section).

Types of Prescribed Fire

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

- **Underburning**—a kind of low intensity prescribed fire used to reduce ladder fuels in order to remove surface fuels but not all of the overstory vegetation. It is used as both a first entry and maintenance burning primarily in conifer forests.
- **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. In some instances, broadcast burning is used to remove overstory vegetation to create openings and optimal conditions for regenerating vegetation.
- **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. 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 (for example, when used in sagebrush vegetation communities).
- **Pile burning**—prescribed fire that burns primarily piles of fuels with some surface fire allowed to spread between them. 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.
- **Tree well burning**—the burning of open patches of surface fuels, beneath the canopy near tree wells, where the snow has melted or pulled back allowing surface fuel to become available to burn. Tree well burning is intended to reduce the threat of mortality to the trees by utilizing a low intensity surface fire near the bole of the tree and low hanging limbs. This type of burning reduces surface fuels (needles and/or smaller limbs). Tree well burning aids in the restoration of fire adapted ecosystems, while reducing the potential for tree mortality from wildland fires that may occur in the summer months.

Pre-treatment Actions (Burn Preparation)

In order 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. Those activities for burn preparation may include the following:

- Hand thinning, slashing, piling, pruning and pile burning would be used to reduce existing surface and ladder fuels to create a fuel bed to carry fire, or to reinforce fire lines. Hand thinning would enhance the ability to improve wildlife habitat, increase tree growth rates, improve stand resiliency to natural disturbance, and reduce density-related competition. All forested areas targeted for the application of fire, including plantations, would be available for hand thinning in order to minimize mortality from prescribed fire, manage vegetation resources, and aid in moving towards resilient conditions. Hand thinning would favor retention of early seral species (ponderosa pine, Douglas-fir, western larch, and quaking aspen), but would retain a mix of species and spatial heterogeneity. This would be achieved by reducing densities of trees generally less than ten inches in diameter at breast height (dbh) and prune residual trees, when practical, up to six feet in height. Cut trees would generally be lopped and scattered to reduce fuel loading under leave trees, but piling would be used as necessary.
- Natural features or other existing features (such as existing roads) would likely be the primary fire control lines. In some limited cases, constructed fireline (handline) may be needed to augment existing features. Constructed fireline would be used to protect high value resources and assets and would be constructed (and rehabilitated post-burn) according to Forest Service best management practices. Such actions would be described in burn plans for each burn unit.
- Select methods of mechanical thinning, piling, chipping and mastication of fuels may be used to reinforce control lines, establish safety zones or as a pre-treatment to increase safety where people are working.
- Limited cross-country motorized vehicle travel supporting implementation, where resource conditions allow.

It is important to note that this proposed action does not include the use of ground-based timber harvesting systems. 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 alone 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.

Post-treatment actions

After the application of prescribed fire, post-treatment monitoring would occur, and based on certain conditions, additional follow-up actions may be triggered. These post-treatment activities are contained in more detail in the project design features.

Project Design Features and Implementation Plan

Prior to using any prescribed fire or associated activities, verification of specific treatment areas would be conducted by an interdisciplinary team of resource specialists to ensure treatment location and design are consistent with prior planning decisions and direction. The project design features and implementation

plan are key elements of the proposed action which help to ensure statutory and regulatory requirements would be met.

- The project design features describe resource conditions or areas where the use of prescribed fire may be adjusted, limited, or excluded. 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 forest plan.
- An implementation plan would direct specific tasks that need to occur prior to proposed activities in an area. Among other elements, the implementation checklist would 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; 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 public involvement and public notices would be provided; and other specific steps that would be completed prior to applying treatment actions (see Implementation Plan).

Project Design Features

Silviculture and Timber (ST) Design Features

ST-1

Design and implement thinning and burning operations in conjunction with a silviculturist to minimize insect outbreaks and increase the resiliency of forested stands.

Activity	Where?	When?	Purpose, Source, or Reference
Thinning/ burning	All areas	All year	Intent of Forest Plan: Technical recommendations

ST-2

Where noncommercial thinning activities are implemented, woody debris, slash, or activity fuels would be pulled back outside of the dripline of remaining trees. Pullback would occur until slash depth is greater than two feet deep.

Activity	Where?	When?	Purpose, Source, or Reference
Thinning/pile burning	All areas	Always	Intent of Forest Plan: Appendix A

ST-3

When overstory mortality in burn plan is exceeded during implementation, agency administrators, fuels specialist and silviculturist will determine reforestation needs based on appendix A of the forest plan.

Activity	Where?	When?	Purpose, Source, or Reference
Broadcast burning	All areas	Always	Silviculture Best Management Practice

ST-4

Live and dead vegetative components will be managed in spatial patch sizes and patterns representative of the appropriate fire regime insofar as current conditions allow. Refer to appendix A of the forest plan for assistance in addressing this guideline.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning	Burn Units	Always	Intent of Forest Plan: VEGU07

Fisheries and Watershed (FWT) Design Features

FWT-1

For this project, riparian conservation areas are defined as 300 feet either side of perennial streams and 150 feet either side of intermittent streams, ponds, lakes, reservoirs, and wetlands (option 1, forest plan, appendix B).

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	All	Anytime	Intent of Forest Plan Appendix B

FWT-2

Storage of fuels or other toxicants, equipment staging or refueling within riparian conservation areas would not be authorized unless there are no other alternatives. Storage of fuels and other toxicants or refueling sites within riparian conservation areas would be reviewed by an aquatic specialist and approved by the responsible official and have an approved spill containment plan commensurate with the amount of fuel.

Approved spill prevention containment and countermeasure plans (SPCC) would be used for prescribed fire. Plans would include direction for transporting, storing, and use of toxic materials, such as spheres and drip torch fuels, to minimize risk of accidental spills and/or introduction into live water.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All riparian conservation areas	Always	Intent of Forest Plan: SWST11

FWT-3

Mastication may occur within riparian conservation areas as described below:

- Heavy equipment would not be allowed within riparian conservation areas or landslide-prone areas unless on a road.
- No mastication (brushing) in riparian conservation areas except from existing road prism - this would allow brushing roads for safety and sight distance.
    - Roadside mastication should not reduce existing shade to waterbodies.
    - Mastication can occur 25 feet from each side of road except at road/stream crossings or where a road parallels and is within 120 feet of a perennial stream.
    - **Road/Stream crossing**: mastication is limited to the cut and fill slope only for 120 feet in both directions of road from crossing.

- **Roads within 120 feet of perennial stream**: mastication up to 25 feet may only occur on the cut slope of the road. On the downslope side of road, only the fill slope would be brushed. If a stream is adjacent to the fillslope, then mastication of the fillslope would be as minimal as possible to allow for safe sight distance while simultaneously minimizing impacts to vegetation in the riparian area.

- Mastication would be implemented in a manner that does not retard attainment of riparian conservation area objectives.
- Mastication efforts would leave the root masses of vegetation so to not cause ground disturbance.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All riparian conservation areas	All times	Intent of Forest Plan: FMST01 Endangered Species Act Clean Water Act

FWT-4

Motorized cross-country travel in riparian conservation areas and meadows would not be allowed.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	Riparian conservation areas, perennial streams	All times, except dry periods	National Best Management Practices for Water Quality Management on Nation Forest System Lands; Vol I National Core BMP Technical Guide (USDA Forest Service, 2012)

FWT-5

Prescribed fire ignition may occur within riparian conservation areas as described below.

Broadcast burning: Ignition would not occur within one site-potential tree height (slope distance) of perennial streams. Fire that further "backs" toward streams (within one site-potential tree height) would be allowed to burn. Higher fuel moistures and higher humidity's in riparian areas typically limit undesirable fire spread and impacts in these areas. Ignitions may occur anywhere along intermittent streams.

Pile burning: Ignition of hand piles may occur within one site-potential tree height of perennial stream channels, if riparian vegetation is sparse, and if agreed to by a hydrologist and fisheries biologist. If riparian vegetation is multi-strata and includes trees and shrubs, piles must be placed well outside of the potential burn zone. The objective of pile burning would be to consume the pile and limit spread from it. In all cases, hand piles would be placed in areas that do not contain riparian vegetation.

Where the possibility exists for plastic sphere dispenser balls to roll downhill into riparian conservation areas (due to steepness of slope or lack of horizontal barriers to movement such as downed wood or understory vegetation) ignition distances in riparian conservation areas would be increased based upon site specific conditions. Develop an ignition pattern or plan that would minimize fire intensity to these areas.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed Fire application	All Waterbodies	Always	Guide to Preventing Aquatic Invasive Species Transport by Wildland Fire Operations (January 2017, page 5), Boise Fire Suppression Guidelines (2013 page 8).

FWT-6

When constructing hand line within riparian conservation areas, use alternatives to ground disturbing fireline construction such as using wet lines, rock outcrops, or other suitable features for firelines. Use natural barriers whenever possible and install appropriate water bar at proper spacing based on slope. Do not allow waterbars to drain directly into streams. Hand line constructed within stream riparian conservation areas would be approved by the agency administrator.

Activity	Where?	When?	Purpose, Source, or Reference
Hand fireline	All	During planning	National Best Management Practices for Water Quality Management on Nation Forest System Lands; Vol I National Core BMP Technical Guide (USDA Forest Service 2012 pgs. 52-60)

FWT-7

Trees or snags that are felled within riparian conservation areas would be left intact unless resource protection (e.g., during fire line construction leaving the material in place risks not meeting wildland fire management objectives) or public safety requires bucking them into smaller pieces.

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	All perennial streams	During implementation	Intent of Forest Plan: SWST10

FWT-8

Trees that provide stream bank stability and shading would not be felled unless necessary for safety or fire control purposes Any trees that are felled within the riparian conservation area would be left onsite and should be left intact (not bucked). Felling of trees for safety and fire control purposes within the riparian conservation area should be approved by the holding or burn boss.

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	All perennial streams	During implementation	Intent of Forest Plan: SWST10

FWT-9

Locate operational sites, such as helicopter landing sites, staging areas, safety zones, and fueling and servicing sites, outside of riparian conservation areas whenever practicable or feasible.

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	Riparian conservation areas	All	Endangered Species Act

FWT-10

No targeted treatments in lethal fire regimes. Fire would be allowed into stands but would be incidental to the action.

No targeted treatments in lethal fire regimes within sub watersheds that are above 15 percent effective clearcut area. Fire would be allowed into stands but would be incidental to the action.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed Fire Application	Lethal Fire regimes	All times	Forest Plan: SWST01, SWST04

FWT-11

Treatments would not increase equivalent clearcut area[1] above 15 percent in the corresponding 6th level hydrologic units unless project-scale analysis demonstrates it would not retard the attainment of soil water riparian and aquatic desired conditions.

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	Riparian conservation areas	All	Forest Plan, Appendix B, Disturbance History Watershed Condition Indicator, Endangered Species Act

FWT-12

While taking action to contain the spread of undesired fire, direction from the Fire Management Activities Biological Assessment would be followed.

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	Riparian conservation areas	All	Endangered Species Act

FWT-13

A post-burn visual assessment would be conducted by fire personnel and a fisheries biologist via a walk-through of selected stream corridors. This would assess implementation of the burn and associated mitigation listed above (e.g., avoidance tactics) to inform future implementation in riparian areas.

Activity	Where?	When?	Purpose, Source, or Reference
All Actions	Riparian conservation areas	All	Endangered Species Act

Soils (S) Design Features

S-1

Operate equipment to minimize soil compaction, displacement, erosion, and sediment runoff. Avoid ground equipment operations on unstable, wet, or easily compacted soils and on steep slopes unless

[1] Equivalent clearcut area means an indicator which expresses, as a percentage of an entire watershed, the degree to which regenerating forest stands are hydrologically similar to clearcuts, relative to the hydrologic status of the original stands.

operation can be conducted without causing excessive rutting, soil puddling, or runoff of sediments directly into waterbodies. Evaluate site conditions frequently to assess changing conditions. Adjust equipment operations as necessary to protect the site while maintaining efficient project operations.

Activity	Where?	When?	Purpose, Source, or Reference
Mechanical Equipment	All Areas	Always Applies	Intent of Forest Plan: SWST02, SWST04. Forest Service National Best Management Practices (USDA Forest Service 2012) (Planning-2; Fire-2)

S-2

Map all constructed fireline and rehabilitate the fireline immediately following the prescribed burn as soon as its cool enough to safely do so. If fireline is constructed and no burning is completed, rehabilitate the fireline immediately after the burn window ends and before onset of winter. Pull soil and litter back into the fireline, scatter slash, and if available and feasible, install water bars. Where fire lines create cut slopes, re-contour the slopes by pulling side cast or fill material back, and scatter slash.

Activity	Where?	When?	Purpose, Source, or Reference
Fireline construction	Firelines, temp routes	Always	Intent of Forest Plan: SWST02, SWST03, NPST03, NPST10, SWST01, SWST04

S-3

Areas determined to have detrimental soil disturbance as a result of prescribed burning (i.e. burn piles) would be rehabilitated to forest plan standards.

Activity	Where?	When?	Purpose, Source, or Reference
Rehabilitation	Firelines, burn piles	Always	Intent of Forest Plan: NPST03, SWST02, SWGU05, FMGU02

S-4

Treatment activities that use ground-based mechanical equipment should emphasize operations that minimize detrimental soil compaction and displacement by following this direction:

1. limit the number of passes over any one area,
2. avoid abrupt sharp angled turns and instead use gentle arching turns and
3. operate over the top of a slash mat or masticated fuels when possible.

Mechanical equipment operations that result in unacceptable detrimental soil compaction and disturbance would be reclaimed.

Activity	Where?	When?	Purpose, Source, or Reference
Mechanical treatments	All areas	Always	Intent of Forest Plan: SWST02 Forest Service National Best Management Practices (USDA Forest Service 2012) (Plan-2; Veg-1; Veg-2; Veg-8).

S-5

Prescribed fires will be implemented when environmental and fuel conditions would result in overall low soil burn severity, with minor discontinuous amounts of moderate severity and negligible amounts of high severity.

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.

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.

High Severity - All or nearly all of the pre-fire ground cover and surface organic matter (litter & duff) is generally consumed, and charring may be visible on very fine and larger roots. Bare soil or white/gray ash is almost continuous. Soil structure may be absent, or soil surface would be baked. Soil is often gray, orange, or reddish at the ground surface where large fuels were concentrated and consumed.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning	All areas	Always	Intent of Forest Plan: SWST02, SWST04, SWST12, SWGU05

S-6

Review and field verification of landslide-prone areas would be conducted in all prescribed fire project areas and mechanical treatment areas. All management actions that may alter soil-hydrologic processes would cumulatively be evaluated as to the risk of landslides within the proposed project areas. Based on the site-specific analysis findings, the project may need to be adjusted or areas avoided to minimize potential risk for triggering landslides. Refer to the Implementation Guide for Management on Landslide and Landslide Prone Areas, located in appendix B of the forest plan to help determine compliance with this direction.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning or mechanical treatments	Moderate and high Landslide-Prone Areas	Always	Intent of Forest Plan: SWST12, SWGU03, SWGU04

S-7

Mechanical treatments and prescribed burning would meet forest plan standards for detrimental soil disturbance, with post-project detrimental disturbance levels in activity areas below 15 percent.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning or mechanical treatments	All areas	Always	Intent of Forest Plan: SWST02

S-8

Coarse woody debris would be maintained at desired conditions or trend toward the desired conditions identified in the forest plan (table A-9).

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning, mastication, or noncommercial thinning	All areas	Always	Intent of Forest Plan: SWST04, SWGU05, VEGU03

S-9

Use of mechanical equipment would be allowed when soil moisture is sufficiently low to prevent detrimental soil disturbance.

- Ground-based heavy equipment would be allowed when soil moisture is sufficiently low, or when adequate winter conditions exist with a sufficient depth of packed snow and/or frozen ground. The Forest Service would determine when and where appropriate operating conditions exist. The intent is to minimize detrimental soil rutting, displacement, and compaction.
- To determine appropriate soil moistures for operations, use the "Field Guide to Soil Moisture Conditions Relative to Operability of Equipment" (see project record).
- Adequate winter conditions should include a sufficient depth of frozen ground and/or packed, dense snow to support machine traffic and prevent detrimental soil disturbance. Typically, these conditions are as follows:
    - Minimum 4 inch depth of frozen soil and no snow;
    - Minimum 2 inch depth of frozen soil and 6 inches machine packed snow; or 0 inch depth of frozen soil and minimum 10 inches machine packed snow

Activity	Where?	When?	Purpose, Source, or Reference
Mechanical equipment or access	All areas	Always	Intent of Forest Plan: SWST02, SWST04

S-10

Limit ground-based mechanical equipment to slopes of 35 percent or less.

Activity	Where?	When?	Purpose, Source, or Reference
Mechanical equipment or access	Steep slopes	Always	Intent of Forest Plan: SWST02, SWST04. Forest Service National Best Management Practices (USDA Forest Service 2012) (Veg-2)

S-12

Minimize detrimental soil effects by locating burn piles on previously disturbed areas, when feasible. Piles should be less than 10 feet in diameter, less than six feet tall, and well dispersed across the activity area. Do not hand pile material greater than four inches in diameter to reduce burn time, or deck larger logs to create an insulating air cushion over the soil surface. Ignite piles from the top to allow burning to slowly move downward as opposed to igniting from bottom.

Activity	Where?	When?	Purpose, Source, or Reference
Pile burning	All areas	Always	Intent of Forest Plan: SWST02, FMGU02

Botany (BT) Design Features

BT-1

Known locations of Endangered Species Act listed, proposed, Region 4 sensitive and forest watch plant species, susceptible to major ground disturbance would be protected from mechanical equipment use, constructed fire line, pile burning, or jackpot burning within the treatment areas. Fire-sensitive special status species would be protected from prescribed burning through ignition patterns, or seasonality. However, prescribed burning treatments and hand thinning activities could be implemented within populations of fire adapted sensitive plant species where management actions would promote the health, resiliency, and regeneration of the species. Minimize fire severity in fire adapted special status plant populations by utilizing burning seasonality and different ignition patterns. To the extent possible these mitigations would apply within a 30 foot buffer of special status plant populations if a botanist determines it is necessary to maintain occupied habitat.

Notify the forest/zone botanist if populations may be (or are) impacted by project activities.

Activity	Where?	When?	Purpose, Source, or Reference
Mechanical equipment use, constructed fireline, pile burning, jackpot burning, and prescribed burning	Areas with sensitive plants	Always	Endangered Species Act, Sensitive species policies, Intent of Forest Plan: TEST04, TEST08, TEGU03, TEGU06, TEGU07, BTST01, BTGU05, BTGU02, BTGO03, NPST11, BTOB02

BT-2

If invasive weed species occur within or adjacent to occupied Endangered Species Act listed, proposed, Region 4 sensitive or forest watch (rare) plant species habitat, weeds would be treated in accordance with The Payette National Forest Noxious Weed and Poisonous Plant Control Program and South Fork Salmon River Subbasin Noxious and Invasive Weed Management Program.

Activity	Where?	When?	Purpose, Source, or Reference
All Project Activities	Activity Area	Always	Intent of Forest Plan: BTGO01, BTOB02, BTOB08, BTST01, BTST04, NPGO01, NPGU01, NPST11, TEST10

BT-3

Whitebark pine would be protected to the extent practicable by implementing the following:

- Avoid cutting, trampling, pruning, or removing any live or dead whitebark pine. This would include landing zones used for implementation.
- Establish surveys prior to fuels treatments in occupied whitebark pine habitat and monitor following fuels treatments. Botany, silviculture and fuels specialists would coordinate to reevaluate prescriptions in occupied whitebark pine habitat. If treatments are not improving survival, regeneration and overall resilience of whitebark pine stands.

- Prior to prescribed fire in areas with whitebark pine, complete 'daylighting' (thin competing tree species) treatments within 30 feet of the dripline of mature (greater than 4 inches) whitebark pine.
- Piles and scattered slash would be placed a minimum of 30 feet from the dripline of all whitebark pine trees.
- Burning treatments in whitebark pine stands would primarily be pile and jackpot burning. Broadcast burning would not typically occur in these stands unless surface fuels are low or mitigated, competing vegetation has been thinned and canopies are open. High severity burns would not occur in whitebark pine stands.
- If daylight thinning activities have not occurred prior to a planned prescribed fire treatment in a unit containing whitebark pine, timing restrictions that reduce or eliminate consumable fuels in the whitebark pine stands, such as fuel moisture and/or snow level, would be used to avoid the spread of fire into whitebark pine occupied stands

Activity	Where?	When?	Purpose, Source, or Reference
All Project Activities Burn Plan Preparation, Pretreatment, and Ignition / Control	Activity Area Stands with cone-bearing whitebark pine.	Always	ESA; Intent of Forest Plan: TEGO02, TEGO04, TEOB19, VEGO01, VEOB01; whitebark pine restoration and management guidelines (Keane et al. 2017) ESA; TEGO01, TEGO02, TEGO03, TEGO04, TEOB19, VEGO01, VEOB01

BT-4

Prescribed fire treatments in unforested, sagebrush, and in potential vegetation groups with ponderosa pine, would only occur if existing conditions were identified and warrant treatment to move the community toward desired conditions identified in the forest plan or if needed for holding and safety concerns.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning, Designing / Planning and Ignition / Control	Low or Wyoming sage communities	Always	Intent of Forest Plan: TEST08, and NPST10, WIST02, WIST03, WIST04, WIGU05, WIGU06

BT-5

Vegetative communities that are moderately or highly departed from historic fire return intervals due to too frequent fire would be excluded from additional application of prescribed fire treatments The burn plan would clearly identify the existing condition, desired future condition and how fuels treatments would achieve desired conditions (see Implementation Plan).

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning, Designing / Planning	Activity Area	Always	Intent of Forest Plan: BTST01, BTGU05, BTGO01, BTGO05, BTGO06

BT-6

Use recommended seed / seedling mixes when it is determined that native vegetation would not sufficiently recover naturally (fireline, burn piles, site stabilization, pollinator habitat, invasive species

infestations, whitebark pine, etc.). Seed / seedling mix would be native and locally-sourced to the extent possible or practicable and developed in coordination with botanist and activity lead to meet the intended revegetation goals for specific locations and treatments. All seed used on National Forest System lands would be certified to be free of seeds from noxious weeds on the current All States Noxious Weeds list. Seeding treatments would be identified by the range staff, hydrologist, soils specialist, and botanist or approved contractor.

Activity	Where?	When?	Purpose, Source, or Reference
Rehabilitation	All areas	Always	Intent of Forest Plan: NPST02, TEST09, BTGO04

BT-7

If milkweed is found in the project area, the botanist, wildlife biologist, and fuels specialist would work together to design a burn to improve monarch habitat in that area. Other landowners and managers should be notified if potential habitat exists.

Activity	Where?	When?	Purpose, Source, or Reference
Designing/ Planning	Burn Units with monarch habitat	Prior to implementation	Intent of Forest Plan: TEGO-ALL, TEST06, TEGU03, TEGU06, and BTGO04

Range (RNG) Design Features

RNG-1

If it is determined an area needs to be rested from livestock grazing following prescribed fire, the area would be rested until monitoring by range staff determines the area has recovered sufficiently to permit grazing.

Activity	Where?	When?	Purpose, Source, or Reference
Design/ Planning and Post-Treatment	Grazing Allotments	Always	Intent of Forest Plan: VEGU05, VEGU06

RNG-2

All equipment used off-road would be cleaned to remove all visible plant parts, dirt, and material that may carry noxious weed seeds. If the project area has noxious weed infestations, equipment would be cleaned again upon leaving the project area. Establish designated equipment washing areas, consistent with forest plan guidance.

Activity	Where?	When?	Purpose, Source, or Reference
Pre-treatment and Ignition/ Control	All areas	Always	Intent of Forest Plan: NPST03, NPST04, NPGU03, and Executive Order 13112 Ensures compliance with Plant Protection Act (PL 106- 224); Noxious Weed Control and Eradication Act of 2004; 36 Code of Federal Regulations Subpart A, Section 222.8; Executive Order 13112; Forest Service Manual 2900; Idaho Plant Pest Act of 2002; Idaho Invasive Species Act of 2008; Forest Plan NPST03, NPST04, NPST09, NPST10, NPGU03, NPGO01, NPGO02, NPGO05, TEST10

RNG-3

Minimize the spread of noxious weeds through timing (for example, when the seeds are not present on the plant) or pre-treatment (see Implementation Plan).

Activity	Where?	When?	Purpose, Source, or Reference
Pre-treatment and Ignition/ Control	All areas of known or identified infestations where they may be at risk of increasing as a result of prescribed fire or connected actions.	Always	Intent of Forest Plan: NPST10, NPST05

RNG-4

New and existing populations of noxious weeds within and adjacent to the project area would be surveyed, and treated prior to and following project implementation.

Activity	Where?	When?	Purpose, Source, or Reference
Designing/ Planning	All areas of known or identified infestations where they may be at risk of increasing as a result of prescribed fire or connected actions.	Always	Intent of Forest Plan: NPST05, NPST10, and Executive Order 13112

Special Areas (SA) Design Features

SA-1

Use natural barriers, when available, to avoid locating ground-disturbing prescribed fire control lines directly adjacent to research natural area boundaries.

Activity	Where?	When?	Purpose, Source, or Reference
Pre-treatment and Ignition/ Control	Burn units	Always	Protection of research natural areas

Wildlife (WLD) Design Features

WLD-1

Within 0.25 miles of occupied sites, all management activities would be coordinated with the district wildlife biologist to ensure activities are consistent with the Forest's Programmatic Consultation (2021). Active above ground Northern Idaho ground squirrel periods are approximately April 1 through August 31, but dates may change depending on the emergence or torpor of Northern Idaho ground squirrel. Prohibited activities during the active period include:

- off-road parking;
- creating burn piles; and
- loading, unloading and using equipment off the road.

Care would be taken not to disturb soil when removing chip material, even if it means leaving some material on the landing.

Activity	Where?	When?	Purpose, Source, or Reference
Implementation	Burn and noncommercial thin units	Within active Northern Idaho ground squirrel periods	Endangered Species Act, Payette National Forest Programmatic Biological Analysis (2021)

WLD-2

No burning of slash piles within a quarter mile of occupied Northern Idaho ground squirrel sites during the active period. Coordinate slash placement and timing of slash pile burning with district wildlife biologist.

Activity	Where?	When?	Purpose, Source, or Reference
Implementation, Burning	Within 0.25 miles of occupied Northern Idaho ground squirrel sites	Within active Northern Idaho ground squirrel periods	Endangered Species Act, Payette National Forest Programmatic Biological Analysis (2021)

WLD-3

All modeled suitable and known occupied habitat would be surveyed prior to implementation. The wildlife staff would conduct on-site presence/absence Northern Idaho ground squirrel surveys, approximately three times within a seven-day period during the appropriate survey time period, to assess potential occupancy and to determine when Northern Idaho ground squirrel have entered torpor.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	Modeled suitable and know occupied habitat	Prior to implementation	Endangered Species Act, Payette National Forest Programmatic Biological Analysis (2021)

WLD-4

Prior to any forest management activities, including, noncommercial thinning and prescribed fire, wildlife staff would conduct onsite surveys to identify threatened, endangered, proposed, or candidate; management indicator; or R4 sensitive species presence to determine if related project design feature would be implemented.

Activity	Where?	When?	Purpose, Source, or Reference
Pre-implementation	All activity areas	Prior to implementation	Intent of Forest Plan: WIST02, WIST03, WIST05, WIGU07), MBTA and Executive Order 13186

WLD-5

Project activities may be altered with timing alterations and avoidance to protect identified migratory bird nests from disturbance or prescribed fire during implementation.

Activity	Where?	When?	Purpose, Source, or Reference
All	All	Anytime	Intent of Forest Plan: WIST02, WIST03, WIST05, WIGU07, MBTA and Executive Order 13186.

WLD-6

In northern goshawk territories with known active nest stands, identify alternate and replacement nest stands during project-level planning when it is determined that the proposed activity would be likely to degrade nest stand habitat, newly discovered active nests would require nest stand buffers and timing restrictions.

Activity	Where?	When?	Purpose, Source, or Reference
Planning	Northern goshawk nest stands	Nesting periods	Intent of Forest Plan: WIST05

WLD-7

To protect big game, in areas closed to public motorized access, prohibit contractors and their employees from access with motorized vehicles for purposes other than implementing project activities.

Protect big game fawning or calving areas, wallows and licks, and known winter / spring range areas. This may require periodic management activity restrictions between May 1 and July 15 in active fawning / calving areas and other measures, as feasible.

Activity	Where?	When?	Purpose, Source, or Reference
Planning	Calving areas	Calving season	Intent of Forest Plan: WIGU11, WIGU12, WIGU13

Engineering (ENG) Design Features

ENG-1

If motorized access is required beyond what is designated in the travel management plan (e.g. for level one system road and existing route use), line officer approval would be needed before its use.

Activity	Where?	When?	Purpose, Source, or Reference
Planning	All area roads	Prior to implementation	36 CFR 212, 36 CFR 261, and Intent of Forest Plan: FRGO01

ENG-3

Roads and road infrastructure within prescribed burns would be patrolled as needed for the first two weeks after ignitions, after above-average rain events before the first winter following the burn, and during the first spring thaw cycle after the burn occurs. This is to ensure roads are safe for use and mitigate hazards that may result from project activities.

Activity	Where?	When?	Purpose, Source, or Reference
Implementation, burning	All roads	Post implementation	Intent of Forest Plan: FRGO01 and FROB03

ENG-4

Damage to road templates (shoulders, ditchline, or surface) or debris left on templates would be repaired or removed prior to completion of the project.

Activity	Where?	When?	Purpose, Source, or Reference
Implementation. Burning Noncommercial Thinning	All roads	Post implementation	Intent of Forest Plan: FRGO01 and FROB03

ENG-5

Noncommercial thinning activities would not cut trees in the travel way of roads without prior approval from engineering.

Activity	Where?	When?	Purpose, Source, or Reference
Implementation. Noncommercial thinning	All roads	Prior to implementation	36 CFR 212 and Intent of Forest Plan: FROB03

Cultural Resources (ARC) Design Features

ARC-1

This project has been cleared for National Environmental Policy Act decision utilizing the R4 Regional Phasing Letter Protocol, a document that provides the State historic preservation officer with an overview of landscape-level resources and identifies the Forest's intent to phase Section 106 and Tribal consultation. Project proponents would work closely with the Payette National Forest heritage team as specific treatment areas are identified. The heritage team can provide advice on previously identified historic properties to be avoided by treatment area redesign early in the planning process.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All areas	Prior to implementation	National Historic Preservation Act Section 106 and National Environmental Policy Act Compliance Phasing Letter, USFS Intermountain Regional Office, dated May 6, 2020

ARC-2

Prior to treatment area implementation, cultural resource surveys within each treatment area would be identified in high probability areas and conducted. A cultural resource report would be submitted to the Idaho State historic preservation officer and concurrence received before implementation activities commence.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All areas	Prior to implementation	National Historic Preservation Act Section 106 and National Environmental Policy Act Compliance Phasing Letter, USFS Intermountain Regional Office, dated May 6, 2020 (see project record)

ARC-3

Prior to treatment area implementation, consultation and coordination with potentially affected tribes would occur through the formal government-to-government consultation process. Where necessary, informal staff-to-staff coordination on project details may also occur.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All areas	Prior to implementation	Standard tribal consultation

ARC-4

Following concurrence from the Idaho State historic preservation officer and consultation with affected tribes but prior to treatment area implementation, the project proponent would conduct a roundtable review to identify and discuss proposed project activities and any mitigation measures. Treatment area implementation would not begin until after resource concerns are addressed and line signs the roundtable approval form.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All areas	Prior to implementation	Forest roundtable protocol (see project record)

ARC-5

If any unforeseen cultural materials are encountered during the course of the project, then all project activities in the immediate proximity would cease until a qualified archaeologist is consulted. Regional inadvertent discovery protocols would be followed.

Activity	Where?	When?	Purpose, Source, or Reference
All Activities	All areas	Implementation	R4 Intermountain Region Inadvertent Discovery Protocol (see project record)

Fuels (FLS) Design Features

FLS-1

Burn treatments would be implemented in accordance with Montana / Idaho Airshed Group.

Activity	Where?	When?	Purpose, Source, or Reference
Burn treatments would be implemented in accordance with Montana / Idaho Airshed Group.	All Areas	Implementation	(ASG001, ASG002, USDA 2020)

FLS-2

Prescribed burning would follow approved prescribed fire burn plans.

Activity	Where?	When?	Purpose, Source, or Reference
Prescribed burning would follow approved prescribed fire burn plans.	All Areas	Implementation	National Wildfire Coordinating Group 2017 and 2020; USDA 2020

Recreation, Scenery, Lands (RSL) Design Features

RSL-1

If burning will impact the Lava Ridge National Recreation Trail, take appropriate precautions to protect the nature and purpose of the trail.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning, Burn Plan Preparation	Lava Ridge National Recreation Trail	All Year	Intent of Forest Plan: REOB22, REGU23, REGU26

RSL-3

If recreation sites, trails or amenities are included in the proposed burn area, notify the public and if necessary, consider site or area closures.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning, Burn Plan Preparation	Recreation Sites, Trails, amenities	All Year	Intent of Forest Plan: FMGO01, REOB08, REST05, REGU06, REGU23, REGU26

RSL-6

If hand thinning or mechanical thinning of fuels occur in areas with a preservation, partial retention or retention visual quality objective, consult with a recreation or visuals specialist to develop appropriate prescriptions. In areas with a preservation visual quality objective, apply mitigation measures, which may include:

1. Stumps should be 12 inches or less on the uphill side to reduce visibility
2. Slash would be lopped and scattered below 36 inches (less if visually intrusive). Material in excess to other resource needs should be removed or piled and burned within one field season.
3. Remaining slash should appear to be mostly natural occurring downed material after project completion.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning, Burn Plan Preparation	Preservation, Partial Retention or Retention Visual Quality Objective Areas	All Year	Intent of Forest Plan: SCGU17

Recommended Wilderness and Inventoried Roadless Areas (RWI) Design Features

RWI-1

In inventoried roadless areas activities will conserve the undeveloped / unroaded character.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning, Burn Plan Preparation	Inventoried Roadless Areas	All Year	Idaho Roadless Rule

RWI-2

If segments of eligible, suitable, or designated wild and scenic rivers are included in the proposed burn area, burn activities will protect or enhance outstandingly remarkable values associated with eligible, suitable, or designated segments.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning, Burn Plan Preparation	Eligible Wild and Scenic Rivers	All Year	Intent of Forest Plan: WSOB01, WSST01; Wild and Scenic Rivers Act

RWI-3

No mechanical (e.g., dozer, excavator, masticator) treatment of fuels would occur within recommended wilderness.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning	Recommended Wilderness	All Year	Intent of Forest Plan: WRGO02, WRGU03

RWI-4

If need arises, fire line construction (handline) within recommended wilderness would be reviewed and recommended by resource specialists prior to implementation, and rehabilitated post-implementation.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning	Recommended Wilderness	All Year	Intent of Forest Plan: WRGO02, WRGU03

RWI-5

No cross-country motorized travel would occur within recommended wilderness. Motorized vehicle use by the national forest in planning and implementation of the project (except for helicopter) would comply with the road and trail restrictions imposed on the general public.

Activity	Where?	When?	Purpose, Source, or Reference
Designing / Planning	Recommended Wilderness	All Year	Intent of Forest Plan: WRGO02, WRGU03

Implementation Plan

This plan broadly ensures that the interdisciplinary team and responsible official would select areas for prescribed fire (and for other treatment activities such as fireline construction), apply the project design features, and implement the activities consistent with the project analysis and decision. The steps shown would take place prior to project implementation.

Twelve to twenty-four months prior to implementation the project proponent would identify the area of treatment. This will allow time for needed clearance work and surveys.

Six to twelve months prior to implementation the project proponent would hold an implementation meeting to ensure all activities are consistent with the project decision.

Botany

Surveys would be conducted in known and potential threatened, endangered, proposed, candidate, sensitive or watch plant species habitat prior to implementation. If plants are present or found through survey, applicable project design features would be followed.

Coordination would take place with the Payette National Forest designated botanist prior to implementation to ensure the following:

- Known threatened, endangered, and Region 4 sensitive plant occurrences are protected, and any effects are commensurate with the effects disclosed in the National Environmental Policy Act document.
- The US Fish and Wildlife Service is notified of planned treatment units, consistent with project biological opinion (to be developed).
- Proposed seeding treatments are consistent with the forest plan as amended and Forest Service policy.
- Determine need for surveys of suitable plant habitat.

Cultural Resources

An archaeologist would be involved in pre-implementation planning and design to ensure compliance with Section 106 of the National Historic Preservation Act, and would ensure the following:

- Identification of cultural resources and determination of significance for eligibility for the National Register of Historic Places.
- Treatments designed to mitigate or minimize any potential effects to historic properties.
- Letter of concurrence from State historic preservation office is received prior to implementation.
- The Tribes have been consulted.
- Avoidance buffers and other mitigation measures would be included in the burn plan.

An archaeologist would be consulted pertaining to containment activities (such as control lines and over land vehicle travel), protection measures (including wet lining, blacklining, and wrapping structures with fire protective material), and post-treatment fireline rehabilitation to restrict public access and minimize post-fire looting or exposure of cultural sites.

Endangered Species Act

A fisheries wildlife and or botanist biologist would be involved in the creation of implementation actions, prior to implementation, to ensure effects to these resources are commensurate with the effects disclosed in the National Environmental Policy Act document. Management actions would be designed to avoid adverse effects to all listed species and their habitats.

Fisheries

Each implementation activity would be reviewed by a Payette National Forest Level 1 Team to review consistency with fire management programmatic activity.

Management actions would be designed to avoid adverse effects to listed species and their habitats.

Within legal authorities, ensure that new proposed management activities within watersheds containing 303(d) listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants that led to the listing.

Hydrology

Management actions would be designed in a manner that maintains or restores water quality to fully support beneficial uses and native and desired nonnative fish species and their habitat.

Management actions would neither degrade nor retard attainment of properly functioning soil, water, riparian, and aquatic desired conditions.

A Payette National Forest hydrologist would be involved in the creation of implementation actions prior to implementation, to ensure effects to watershed health are commensurate with the effects disclosed in the National Environmental Policy Act document.

A Payette National Forest hydrologist would be involved in burn plan development to determine appropriate percentage of watershed to be treated annually, including treatments within riparian areas and municipal water supplies, and consulted on when hydrological function has recovered enough for further treatment.

Minerals and Geology

There would be coordination with the Payette National Forest minerals program manager when developing the burn plan.

Range

A range specialist would ensure the following prior to implementation:

- Permittees are notified of allotments and pastures affected by a prescribed fire.
- If temporary rest of pastures / allotment areas is anticipated or needed, the Payette National Forest would work beforehand with livestock permittees to plan for and provide the needed rest.
- Range structural improvements are identified and protected to the extent practical.
- The timing and pre-treatments are discussed to identify maximum effects to reduce noxious weed spread and invasive annual grass establishment or expansion.
- Project areas would be inventoried for noxious weeds prior to treatment and monitored for noxious weeds following treatment. If necessary, weeds identified would be treated under existing Forest-wide environmental assessment.

Project activities would comply with the forest's invasive/noxious weed management direction (USDA Forest Service 1987).

Recreation

Coordinate implementation action development with a recreation specialist to ensure the project design features are implemented.

If permitted special uses occur within the proposed burn area, coordinate with permittees and permit administrators as needed.

If trails and trail infrastructure are included in the proposed burn area, coordinate with the district recreation manager during burn plan preparation to ensure protection or repairs needs are addressed.

Silviculture

Any silvicultural treatment activities that manipulate vegetation, including most fuel treatments in forest vegetation, would require a silvicultural prescription. Burn plans within forest vegetation would be reviewed by a certified silviculturist and would be consistent with silvicultural objectives (Forest Service Manual 2478.3).

Soils

All project areas would be reviewed by a soils specialist as to their suitability and limitations for uses based upon available soil survey or Land Systems Inventory information.

Fire avoidance areas and site specific project design features will be identified to meet soil detrimental disturbance and landslide prone forest plan standards.

Wildlife

All modeled suitable and known occupied habitat would be surveyed prior to implementation. The wildlife staff would conduct on-site presence/absence Northern Idaho ground squirrel surveys, approximately three times within a seven-day period during the appropriate survey time period, to assess potential occupancy (WLD-1 project design feature).

A wildlife biologist would attest to sensitive species surveys in the burn area and review timing of treatment relative to nesting habitat of migratory birds.

A biologist will coordinate with the US Fish and Wildlife Service and Idaho Department of Water Resources and ensure that wildlife design features are incorporated where needed.

References

Interagency Fuels Management Committee and LANDFIRE. 2010. National Interagency Fuels, Fire, and Vegetation Technology Transfer. https://www.conservationgateway.org/Documents/NIFTT%20Tech%20Transfer%20Brochure%20081910.pdf

LANDFIRE: LANDFIRE Existing Vegetation Type layer. 2016. U.S. Department of Interior, Geological Survey. [Online]. Available: http://www.landfire.gov/fuel.php.

PMS 424-1 2020. NWCG Prescribed Fire Summary and Final Complexity Worksheet. https://www.nwcg.gov/sites/default/files/publications/pms424-1.xlsx. Accessed 16 March 2021

PMS 484-1 2017.Interagency Prescribed Fire Planning and Implementation Procedures Guide. https://www.nwcg.gov/sites/default/files/publications/pms484.pdf. Accessed: 16 March 2021

USDA Forest Service.2018. Intermountain Region Cultural Resources Inadvertent Discovery Protocol. Intermountain Region, Ogden UT.

USDA Forest Service 1986. Payette National Forest Land and Resource Management Plan. USDA Forest Service. McCall, ID https://www.fs.usda.gov/main/Payette/landmanagement/planning.

USDA Forest Service 2008. Memorandum of Understanding Between the U. S. Department of Agriculture Forest Service and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds.

USDA Forest Service 2011. Forest Service Manual 2600. Wildlife, Fish, and Sensitive Plant Habitat Management.

USDA Forest Service 2012. National Best Management Practices for Water Quality Management on National Forest System Lands. Volume 1: National Core BMP Technical Guide. FS-990a. Available online at http://www.fs.fed.us/biology/resources/pubs/watershed/FS_National_Core_BMPs_April2012.pdf

USDA Forest Service 2017. Payette National Forest Assessment: Terrestrial Ecosystems, System Drivers, and Stressors Report. USDA Payette National Forest. McCall, ID.

USDA Forest Service 2020. Forest Carbon Assessment for the Payette National Forest. USDA Payette National Forest. McCall, ID

USDA Forest Service 2020. NHPA Section 106 and NEPA Compliance. USDA Intermountain Region. Ogden, UT.

USDA Forest Service 2021. Payette Endangered Species Act Programmatic Consultation for Fire Management Activities. USDA Payette National Forest. McCall, ID.