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Environmental Assessment

Strawberry Forest Management Project

Montpelier Ranger District, Caribou-Targhee National Forest
Franklin County, Idaho

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SUMMARY

The Montpelier Ranger District of the Caribou-Targhee National Forest proposes to treat 2,658 acres with a combination of vegetation management activities throughout the project area to improve the condition of the forest ecosystems. The project area is located approximately 15 miles west of Montpelier in T12S R41E Sec 25, 36, T12S R42E Sec 29, 30 31, 32, T13S R42E Sec 5, 6, 7, 8, T13S R41E Sec 1, 2, 11, 12, 13, 14, 15; Boise Meridian, Franklin County, Idaho.

The overarching direction for this project comes from the Revised Forest Plan for the Caribou National Forest (RFP). The citation in the reference list for the Revised Forest Plan is (USDAFS 2003a), but will be referred to as (RFP) from this point forward in the document.

The RFP Prescription areas for this project are 2.1.2(b) Visual Quality Maintenance, 3.3(b) Semi-Primitive Restoration, 3.2(b) Semi-Primitive Motorized, 5.2(b) Forest Vegetation Management, and 8.1(u) Concetrated Development Area – Utilities. The Vicinity Map of the Project Area is displayed in Figure 1. The inset in this map shows where the project is located in the State and on the Forest. The main section of the map shows where the project area is located relative to the town of Montpelier, ID.

This action is needed, because currently, approximately 92% of the forested acres in the landscape are in the mature or late seral age-class, which is well outside of the desired condition outlined in the RFP. Landscapes outside of the historical range of conditions are less resilient to future disturbances. There is a need to reduce tree density of mature trees and create a new age-class dominated by early seral tree species (i.e. aspen).

Based upon the effects of the alternatives, the responsible official will decide if management activities including: timber harvest and prescribed burning should be implemented in the Strawberry proposed project area at this time

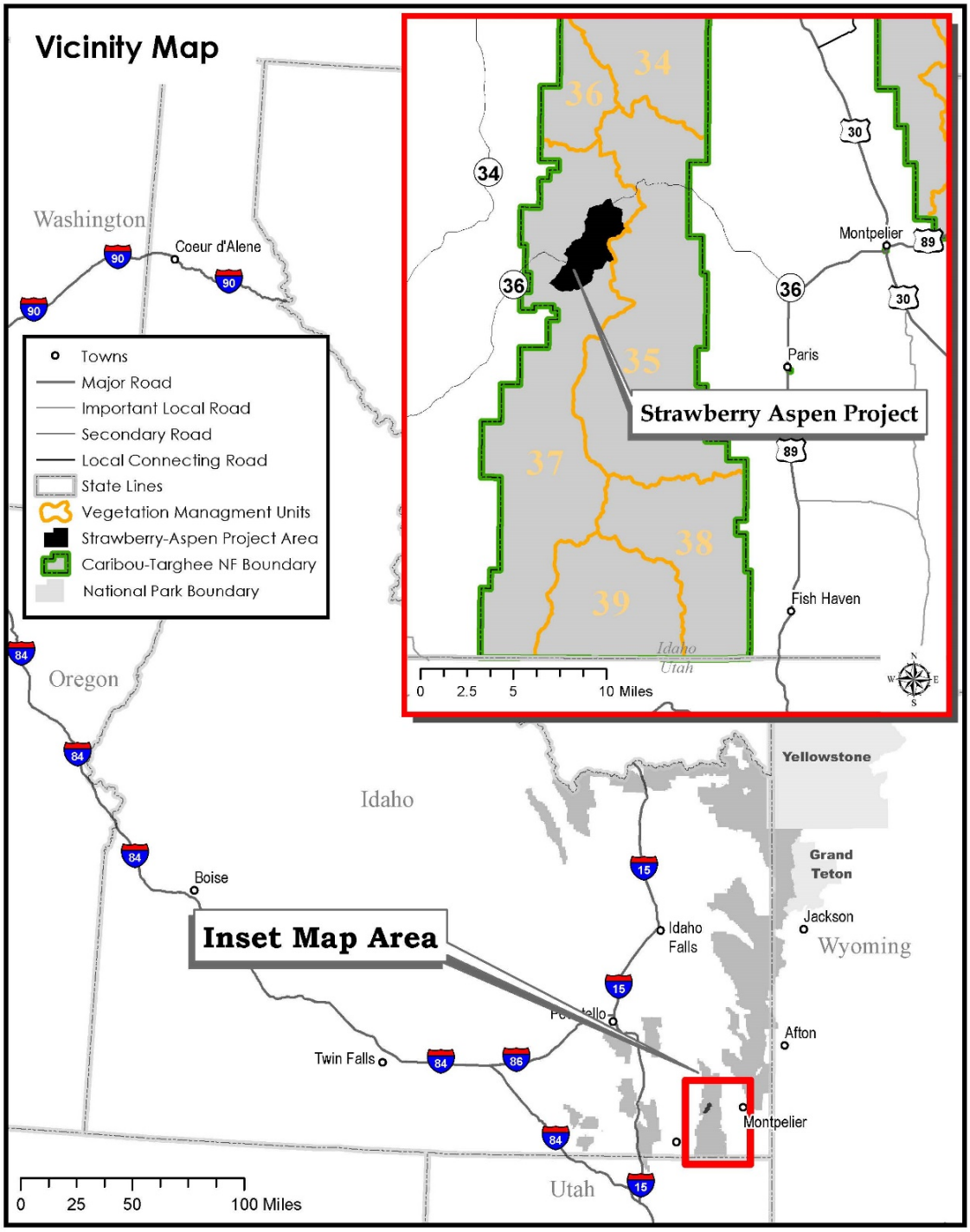

Figure 1: Vicinity Map of Project Area. The inset in this map shows where the project is located in the State and on the Forest. The main section of the map shows where the project area is located relative to the town of Montpelier, ID.

INTRODUCTION

Document Structure

The Forest Service has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

- *Introduction:* The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Comparison of Alternatives, including the Proposed Action:* This section provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes possible mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- *Environmental Consequences:* This section describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by resource area. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison of the other alternatives that follow.
- *Agencies and Persons Consulted:* This section provides a list of preparers and agencies consulted during the development of the environmental assessment.
- *Appendices:* The appendices provide more detailed information to support the analyses presented in the environmental assessment.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Montpelier Ranger District Office in Montpelier Idaho.

Background

The Forest seeks to conduct a forest management project in the project area because existing conditions are outside desired conditions outlined in the RFP. A review of conditions in this landscape indicates that forest structure is out of balance. The dense mature and late seral age classes are over represented, with a corresponding shortage of younger and early seral age classes. As a result, aspen as well as other seral species are declining across the landscape. This creates conditions that are at an increased risk to uncharacteristic disturbances (insects and wildfire) and are less resilient to these disturbances. Also, assessments show some roads in the project area are poorly located, resulting in roads that are hard to maintain in a useable condition, which results in resource concerns. The Forest believes that actively managing forest and road resources in the area is the best course to improve the condition of this landscape.

Purpose and Need for Action

The purpose of this project is to improve the overall health and resilience of forests in the landscape by reducing tree density and accumulated fuels, while shifting species composition and age-class structure toward desired conditions. This action is needed, because forest structure, density and composition has changed due to the lack of fire over the last 120 years. Historically fire played an important role in shaping the forests in this landscape. Mixed and low severity fire burned relatively frequently across the landscape, killing patches, clumps and individual trees. This created a mosaic of ages, densities and sizes of trees. Stands and the landscape as a whole were more resilient to disturbance events because of the diversity and mosaic resulting from this natural disturbance regime. In the absence of fire disturbance fuels, tree densities, late seral tree species and average stand ages have all increased. Currently, approximately 92% of the forested acres in the landscape are in the mature or late seral age-class. This is well outside of the desired condition outlined in the Caribou National Forest RFP. Landscapes outside of the historical range of conditions are less resilient to future disturbances. There is a need to reduce tree density of mature trees and create a new age-class dominated by early seral tree species (i.e. aspen). This action responds to the goals and objectives outlined in the RFP, and helps move the project area towards desired conditions described in the plan (USDAFS 2003a).

Proposed Action

The Forest Service proposes to treat 2,658 acres with a combination of vegetation management activities throughout the project area to improve the condition of the forest ecosystems. These vegetation management treatments can be divided into three categories: harvest (283 acres), mechanical and prescribed burn (1,373 acres), and prescribed burn 1,002 acres. More information on the proposed action is provided in the alternative section.

Decision Framework

Given the purpose and need, the deciding official reviews the proposed action and the other alternatives in order to make the following decisions:

- Should management activities including: timber harvest and prescribed burning be implemented in the Strawberry proposed project area at this time?

- If so:
  - Where within the project area should these activities occur?
  - What type and mix of timber harvests and prescribed burning should be used on this specific portion of Forest Service managed lands?
  - What design features, mitigation measures, and monitoring should be applied to the project?
- And:
    - Which alternative provides the best balance of all issues under consideration?

Management Direction Relative to the Analysis Area

This analysis tiers to the Caribou National Forest RFP Final Environmental Impact Statement, Appendices and Amendments. The Caribou (RFP) provides guidance and direction for forest management decisions and allocates uses across forest landscapes. The RFP was derived from an interdisciplinary process with public and community involvement. The RFP uses prescription areas to allocate uses and emphasize resource priorities. Specific Forest-wide plan direction for resources and uses and management prescription area direction relative to the Proposed Action are discussed below. Discussion of the effects of this guidance on specific resource areas and uses is discussed in Chapter 3.

Forest-Wide Guidance

Ecological Processes and Patterns (RFP 3-3 to 3-4)

- Ecological systems and their components are maintained to be dynamic and resilient to disturbances. Vegetation structure, compositions, and densities are appropriate for maintaining physical and biological processes at any temporal or spatial scale. Ecosystems are not at risk of disturbance beyond the point of resiliency and sustainability. (DFC)
- All fires shall be suppressed if they are in areas not covered by a pre-approved fire management plan. (Standard)

Soils (RFP 3-6&7)

- Landtypes identified as being unstable or marginally unstable in the *Caribou N.F. Soil Resource Inventory* shall be ground verified prior to soil disturbing activities to determine the capability of the land to sustain resource development activities including road construction. (Standard)
- Suitability for resource management activities shall be disclosed in the site-specific analysis. (Standard)
- For ground-disturbing activities when detrimental soil disturbances occur on areas of 10 acres or greater, plan and implement rehabilitation to meet desired future conditions. (Standard)
- On landtypes where landslides or landslide prone areas have been identified, a site-specific analysis shall be conducted to ensure project implementation is compatible with the desired future conditions. (Standard)
- Resource developments and utilization should be restricted to lands identified in the Soil Resource Inventory as being capable of sustaining such impacts. (Guideline)
- Maintain ground cover, microbiotic crusts, and fine organic matter that would protect the soil from erosion in excess of soil loss tolerance limits and provide nutrient cycling. (Guideline)
- Detrimental soil disturbance such as compaction, erosion, puddling, displacement, and severely burned soils caused by management practices should be limited or mitigated to meet long-term soil productivity goals. (Guideline)

- Reduce soil erosion to less than the soil loss tolerance limits on lands disturbed by management activities within one growing season after disturbance.
- Sustain site productivity by providing the minimum amounts of woody residue greater than or equal to 3 inches in diameter dispersed on the site as outlined in Table 3-1, RFP 3-7. These do not apply within a 300-foot corridor on either side of roads designated as open on the most current version of the Travel Plan.

Air Quality (RFP 3-8)

- 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. (Standard)
- Follow visibility and clearing index Guidelines when implementing management practices such as prescribed burning. (Guideline)
- Ensure treatments using prescribed fire are consistent with EPA's Interim Air Quality Policy on Wildland and Prescribed Fires, or more current direction. (Guideline)

Minerals and Geology (RFP 3-11)

- Give priority to use of currently developed mineral material (sand, clay, gravel and stone) sources over undeveloped sources. New sources can be identified when existing sources are unable to economically or safely supply the quality and quantity of material needed. (Guideline)

Watershed and Riparian Resources

- Watersheds provide a well-distributed pattern of nutrients and energy as well as diverse age-classes of vegetation that contribute to watershed health. (DFC)
- Riparian areas have a range of vegetative structural stages that are at, or moving towards, a properly functioning condition, have features necessary to promote stable stream channels, provide diverse habitat conditions for both aquatic and terrestrial wildlife species and deliver clean water in support of the Clean Water Act and State Drinking Water Act. (DFC)
- Not more than 30% of any of the principal watersheds and their sub-watersheds should be in a hydrologically disturbed condition at any one time. (Guideline)
- Proposed actions analyzed under NEPA should adhere to the State Source Water Assessment Plan to achieve consistency with the Safe Drinking Water Act, and amendments, to emphasize the protection of surface and ground water sources used for public drinking water. (Guideline)
- Projects in watersheds with 303(d) listed water bodies and/or delineated Source Water Protection Areas should be supported by scale and level of analysis sufficient to permit an understanding of the implications of the project within the larger watershed context. (Guideline)

- Proposed actions analyzed under NEPA should adhere to the State Non-Point Source Management Plan to best achieve consistency with both Sections 313 and 319 of the Federal Water Pollution Control Act. (Guideline)

Vegetation (RFP 3-17 to 3-20)

- Forest habitats display a diversity of structure and composition. Productive and diverse population of plants are maintained or restored. (DFC)
- In conifers, a range of structural stages exists where 30 to 40% of the acres are in mature and late seral (old) age classes. Early successional stages are maintained through endemic insect and disease disturbance, vegetation management and fire. Patterns are with historical ranges of variability with functional corridors present. (DFC)
- Conifer types are maintained and disturbance processes are restored through vegetation management, endemic insect and disease disturbances, and fire. (DFC)
- Quaking aspen communities are moving towards historical ranges with fire and other practices influencing structural class distribution and patterns across the landscape. Aspen forests are managed to achieve desired vegetative conditions with 20 to 30% in mature and late seral (old) classes, and to reduce the decline of aspen acres due to succession of aspen to conifer. (DFC)
- In each 5th code HUC which has the ecological capability to produce forested vegetation, the combination of mature and late seral (old) age classes (including old growth) shall be at least 20% of the forested acres. At least 15% of all the forested acres in the HUC are to meet or be actively managed to attain old growth characteristics. (Standard)
- The definition of old-growth characteristics by forest type found in "Characteristics of Old-growth Forests in the Intermountain Region" (USDA Forest Service 1993) shall be used unless more current direction is developed. (Standard)
- Silvicultural prescriptions shall be completed for all forested vegetation treatments. (Standard)
- Manage to reduce the decline of aspen and promote aspen regeneration and establishment. Provide protection from grazing where needed and consistent with management objectives. (Guideline)
- Focus treatments on aspen clones, which are at the greatest risk of conversion to conifer. (Guideline)
- For aspen and conifer types, acres classified as mature and late seral (old) should be in blocks over 200 acres in size unless the natural patch size is smaller. (A block can consist of a combination of mature, late seral and old-growth forest types). Within these blocks: (Guideline)
    - Maintain the dead and down woody material Guidelines for wildlife.
    - Silvicultural techniques may be used to maintain or improve old growth and mature forest characteristics.
    - If a catastrophic event (such as fire) reduces the acres of old-growth, late seral, and mature forest below 20% of the forested acres in a principal watershed, identify

replacement forested acres. When necessary, use silvicultural techniques to promote desired characteristics in the replacement acres.

- When delineating late seral (old) forests, use the definitions of late seral stages by forest type as shown in RFP table 3.2. These are Guidelines and site-specific stand structure should determine delineation of late seral stands. (Guideline)
- Use methods of vegetation treatment that emulate natural disturbance and successional processes. (Guideline)
- Forest vegetation manipulation is allowed on unsuitable timberlands to accomplish individual management prescriptions, other than resource benefits or for reduction of hazardous fuels in urban interface zones. Production of wood products should not be the primary consideration. (Guideline)
- Vegetation manipulation may include mechanical treatments, chemical treatments, commercial or non-commercial timber harvest of wood products, prescribed fire, wildfire for resource benefit, or other appropriate methods. Manipulations should emphasize ecological and multiple-use outcomes over being "above cost". (Guideline)
- Wood fiber should be utilized consistent with ecosystem management and multiple use goals. (Guideline)
- Give priority to vegetation treatments in private land interface zones or those vegetation types identified as having a high degree of departure from HRV. (Guideline)

Noxious Weeds

- The introduction and spread of noxious weeds and other invasive plant species are contained, and ecologically sound methods of control are applied across the forest. New infestations of noxious weeds are rare across the landscape and existing large infestations are slowly declining. (DFC)
- Only weed free hay, straw, pellets, and mulch shall be used on Forest. (Standard)
- All seed used shall be certified to be free of noxious weeds from weeds listed on the current *All Stages Noxious Weeds List*. (Standard)
- Gravel or barrow material sources shall be monitored for noxious weeds and other invasive species. Sources infested with noxious weeds shall be closed until the weeds are successfully controlled. (Standard)
- Noxious weeds shall be aggressively treated throughout the Forest, unless specifically prohibited, following the Caribou Noxious Weed Strategy. Using Integrated Weed Management, methods of control and access shall be consistent with the goals of each prescription area. (Standard)
- Weed treatment projects, especially those using herbicides should be timed to achieve desired effects on target vegetation, while having minimal effects on non-target vegetation. (Guideline)
- Monitor, as needed, disturbed areas such as landings, skid trails, roads, mines, burned areas, etc., for noxious weeds or invasive species and treat where necessary. (Guideline)

- Evaluate the potential for invasion by noxious weeds into proposed vegetation units and modify units or mitigate where necessary. (Guideline)

Plant Species Diversity

- Forest-wide vegetation communities have the necessary structure and composition, ecological processes and function to maintain native plant species. (DFC)
- Projects and activities shall be managed to avoid adverse impacts to sensitive plant species that would result in a trend toward federal listing or loss of viability. (Standard)
- Native plant species from genetically local sources should be used to the extent practical for erosion control, fire rehabilitation, riparian restoration, road right-of-ways seeding and other revegetation projects. (Guideline)
- Where practical, disturbed sites should be allowed to revegetate naturally where the seed source and soil conditions are favorable and noxious weeds are not expected to be a problem. (Guideline)
- The Forest Botanist or Ecologist should review seed mixes used for revegetation to insure non-adverse impacts to threatened, endangered, sensitive species, other species at risk, and the overall native flora with the analysis area. (Guideline)

Wildlife Resources (RFP 3-24 to 3-33)

- The Forest provides habitat that contributes to state wildlife management plans. (DFC)
- Forest management contributes to the recovery of federally listed threatened, endangered, and proposed species, and provides for conditions which help preclude sensitive species from being proposed for federal listing. (DFC)
- In project analyses affecting the habitats listed below, assess impacts to habitat and populations for the following management indicator species: (Standard)
    - Grassland and open canopy sagebrush habitats – Columbian Sharp-tailed Grouse
    - Sagebrush habitats – Sage Grouse
    - Mature and late seral (old) forest habitat – Northern Goshawk
- Survey for the presence of sensitive species if suitable habitats are found with a project area at a minimum of once prior to, or during project development.
- Following forested vegetation treatments, an average of 11 logs per acre should be left consisting of logs in decomposition classes 1, 2 and/or 3 (where they exist). (Guideline)
    - In specific areas where fuel loading and fire hazard are a concern (i.e. urban areas), the number of logs per acre can be reduced to meet acceptable fuel loading standards.
    - This guideline does not apply within 300 feet of an open designated route.
    - These requirements can be achieved, in part with the down woody debris requirements for soils; they are interrelated and are not cumulative.
    - Logs do not need to be evenly distributed over the forested acres. Some acres may have no logs, while others may have many more than 11 logs per acre. The

Guideline is to have an average of 11 logs per acre on at least 60 percent of the forested acres of each analysis area.

- Public, workforce, and contractor safety shall be considered and provided for selecting the arrangement of retained snags and trees. (Standard)
- Snags with existing cavities or nests shall be the priority for retention. (Standard)
- Snag height shall be 15 feet or greater for all forest types. (Standard)
- Snags ≥ 12 inches diameter breast height (DBH) or the largest diameter for the stand should be retained in clusters, where possible. (Guideline)
- Hard-snag densities for various biological potentials (see Table 3.3 in RFP) should be maintained. The analysis area for calculating biological potential for woodpeckers should usually be the specific management prescription area polygon. Smaller analysis areas can be used when identified for site-specific projects. (Guideline)
- Retain live trees for future snag recruitment following Guidelines for various biological potentials. (Table 3.4 of the RFP)
- If existing snag levels are below the biological potential for woodpeckers that is identified for a prescription area, no dead standing trees should be harvested. Snag creation should only occur if specified as mitigation in a project level analysis. (Guideline)
- Strive not to disturb or destroy existing nests, whether active or inactive. (Guideline)
- The management standards and Guidelines in Table 3.5 in the RFP apply to all forest types within active and historic goshawk nesting territories. (Standard and Guideline)
- Do not allow timber harvest activities within a 30-acre area around all known flammulated owl nest sites. (Guideline)
- Within a 3,600-acre area around all known boreal owl nest sites, maintain over 40% of the forested acres in mature and late seral (old) age classes. (Guideline)
- Within a 1,600-acre area around all known great gray owl nest sites, maintain over 40% of the forested acres in mature and late seral (old) age classes. (Guideline)
- Provide for vegetation buffers of at least one sight distance around big game concentration/use areas such as wallows and mineral licks. Sight distance is the distance at which 90% of a deer or elk is hidden from an observer. (Guideline)
- Provide for security or travel corridors near created openings. (Guideline)
- Where summer or fall habitat conditions, including security areas, are identified as factor in not meeting State population objectives, work with State wildlife management agencies to address the issue(s). (Guideline)

Recreation (RFP 3-39 & 3-40)

- People visiting the National Forest enjoy a broad range of recreation opportunities amid natural settings. Recreation experiences and settings meet public expectations of quality and variety, while complimenting other resource objectives. (DFC)

- Projects should be planned and implemented to meet the Recreational Opportunity Spectrum (ROS) as depicted on the Forest ROS map. (Guideline)

Scenic Resources (RFP 3-40)

- The scenery of the Forest reflects both natural and modified appearing landscapes. (DFC)
- Until the Scenery Management System is fully implemented, projects should be planned and implemented to meet the VQO's as displayed in the Forest VQO map. (Guideline)

Heritage Resources and Tribal Treaty Rights (RFP 3-41)

- Historic and archaeological resources are properly managed to provide for preservation of these non-renewable resource for current and future generations. Significant sites are inventoried, protected, and, if warranted, nominated to the National Register of Historic Places. Visitors to the Forest find opportunities to learn about and enjoy their cultural heritage (DFC).
- Cultural resource inventories shall be conducted in consultation with the Idaho State Historical Preservation Office, local Native American Tribes, and interested individuals or organizations likely to have knowledge or interest in the historic properties in the area. (Standard)

Grazing Management (RFP 3-42 to 3-43)

- Livestock grazing shall be restricted following prescribed or natural fire and/or rangeland planting or seeding before seed set of the second growing season, or until the objectives of the treatment are achieved. (Standard)

Timber Management (RFP 3-44 to 3-46)

- Provide wood fiber while maintaining a healthy and sustainable forest (DFC).
- Management prescriptions preserve and enhance the diversity of plant and animal communities over time, including endemic and desirable naturalized plants an animal species (DFC).
- All commercial sales, including sawtimber, convertible products, select material, and commercial firewood, shall be advertised and sold on a bid basis, unless demand can be met and "sale on demand" sales can be justified. (Standard)
- For tree planting projects, tree seedlings used shall be native species grown from seed from the appropriate seed zone, matched to site and elevation. (Standard)
- The maximum size of limit for forested vegetation openings created in one harvest operation by an even-aged silvicultural system shall normally be 40 acres. Openings may exceed 40 acres in aspen and lodgepole types contingent on Regional Forester approval, or as a result of natural catastrophic conditions such as fire, insect and disease, or windstorm. (Standard)
- A harvested area of commercial forestland shall not be considered a created opening for silvicultural purposes when stocking surveys indicate the minimum stocking is achieved and average tree height equals or exceeds seven feet. When other resource management

considerations prevail, a created opening shall no longer be considered an opening when the vegetation meets a particular management objective stated in the applicable management prescription. (Standard)

- Suitability shall be verified at the site-specific level. (Standard)
- Design timber management projects to simulate natural patch sizes and shapes, connectivity, species composition, and age-class diversity in accordance with silvicultural prescriptions. (Guideline)
- The silvicultural system used on managed timberlands should allow for control of pests, animal damage, including livestock, and vegetation competition to promote regeneration and tree growth at optimum levels. (Guideline)
- When feasible and appropriate, use prescribed burning to dispose of slash to reduce fire hazard and to promote seedbeds for natural regeneration. (Guideline)
- A full complement of harvest systems and techniques may be used across the Forest unless specifically prohibited or limited by individual prescription direction. (Guideline)
- Minimum stocking levels for regeneration treatments by vegetation type are: 170 trees/acre for lodgepole, 140 trees/acre for Doulas-fir, 200 trees/acre for mixed conifer and 5,000 trees/acre for aspen stands on at least 70% of the stand (unless specified differently in the site specific prescription). (Guideline)
- Limit tractor skidding to slopes less than 40% and generally prohibit logging on slopes over 60%. (Guideline)
- Consider the use of helicopter logging methods or other specialized logging methods on slopes in excess of 40%.
- Yarding operations should not take place when ground conditions are wet enough that there is a risk of rutting and compaction as determined by the sale administrator. (Guideline)
- Minimize skid trails and temporary roads during logging operations. Identify skid trails and temporary roads requiring construction in the sale planning process, and assure appropriate rehabilitation of these trails by the purchaser or in post-sale activities. (Guideline)
- Commercial sales of forest products should be offered in a variety of sale-size packages to meet the needs of small and large operations. (Guideline)

Prescription Area Guidance

The project area is within six RFP management prescription areas as displayed in Table 1. The majority of the project area is within Semi-Primitive Motorized, Semi-Primitive Restoration, Visual Quality Maintenance, and Forest Vegetation Management. The direction for the four that represent measurable percentages are summarized below.

Prescription Code	Prescription Description	Acres	Percentage of Project area
3.2(b)	Semi-Primitive Recreation	2,585	43%
3.3(b)	Semi-Primitive Restoration	1,499	25%
2.1.2(b)	Visual Quality Maintenance	1,349	22%
5.2(b)	Forest Vegetation Management	565	9%
8.1u	Concentrated Development Area - Utilities	13	<1%
2.7.2(d)	Elk and Deer Winter Range	6	<1%
	Total	**6,017**	100%

Table 1: RFP Prescription areas that fall within the project area.

Semi-Primitive Recreation (Prescription 3.2, RFP 4-57 to 4-58

This management prescription emphasizes is to maintain or enhance semi-primitive motorized, and dispersed recreation opportunities. The RFP also outlines desired future conditions for this prescription area, as well as numerous standards and guidelines. Some of the most relevant to this project are listed below.

- Maintain snag habitat at 60 percent or higher of the biological potential for woodpeckers. (Guideline)
- Wood product or timber harvesting for fuels reduction or restoration projects, are allowed. (Guideline)

Semi-Primitive Restoration (Prescription 3.3, RFP 4-59 to 4-61)

This management prescription emphasizes ecological restoration to improve resource conditions that are not functioning properly. The RFP also outlines desired future conditions for this prescription area, as well as numerous standards and guidelines. Some of the most relevant to this project are listed below.

- Maintain snag habitat at 60 percent or higher of the biological potential for woodpeckers. (Standard)
- Consider management actions, including mechanical treatments and other tools that would restore vegetation patches and patterns; are compatible with disturbance processes and encourage attainment of restoration goals. (Guideline)
- Livestock grazing practices should be adjusted if they are preventing attainment of the restoration goals. (Guideline)

Visual Quality Maintenance (Prescription 2.1.2, RFP 4-23 to 4-24)

This prescription emphasizes maintaining the existing scenery within major travel corridors with high quality natural vistas, while allowing livestock production, and other compatible commodity outputs. Timber harvest is permitted but the area is not part of the suitable timber

base. The RFP also outlines desired future conditions for this prescription area, as well as numerous standards and guidelines. Some of the most relevant to this project are listed below.

- Snag habitat for woodpeckers shall be allowed to fluctuate with natural disturbance processes (fire, insects, and disease). (Standard)
- Site-specific areas may have snags removed for human safety and other resource management needs. (Guideline)
- Timber harvest can occur for such things as public safety, visual quality, long-term sustainability of ecosystem components, and/or to meet the goals of the prescription. (Standard)

Forest Vegetation Management (Prescription 5.2, RFP 4-71 to 4-74)

The emphasis in this prescription is on scheduled wood-fiber production, timber growth, and yield while maintaining or restoring forested ecosystem processes and functions to more closely resemble historical ranges of variability with consideration for long-term forest resilience.

- Practices to prevent or control natural disturbances, such as insect and disease losses and wildfire, are emphasized (Guideline).
- Prescribed fire may be used to reduce fuel loading; obtain natural regeneration; for wildlife habitat improvement; and for other purposes that meet the goals of this prescription (Guideline).
- Maintain snag habitat at =40 percent of the biological potential for woodpeckers (Guideline).
- Where aspen exists, it should be maintained or enhanced as a component through restoration treatments. (Guideline)
- All ground-disturbed areas within an activity area should be monitored for five years for noxious weeds invasions.
- Opportunities to improve scenic integrity should be considered in proposed vegetation treatments.
- Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use would not conflict with regeneration and restoration efforts.
- All forms of timber harvest, including salvage, to achieve stated goals and objectives are permitted.

Idaho Roadless Areas - Forest Service Manual (R1) Chapter 20

Idaho Roadless Areas Policy

- All road construction and road reconstruction projects, timber cutting, sale, or removal activities and discretionary mineral activities proposed by the Forests in Idaho Roadless Areas, regardless of decision authority shall be reviewed by the Regional Forester prior to initiation of public scoping.
- The Strawberry proposed action was presented to the Idaho Roadless Commission on October 2, 2019. The Commission deemed the project was consistent with the Idaho Roadless Rule and to proceed with environmental analysis. For more information on Idaho Roadless Management Themes and the Proposed Action refer to the alternative section below.

Idaho Roadless Areas and Strawberry Project

The Strawberry Forest Management Project is within three Roadless areas, which are Liberty Creek, Mink Creek, and Williams Creek. The table below provides further information about the project and Roadless areas.

Roadless Area Name	Management Theme	Acres	Percentage
Liberty Creek	Backcountry Restoration	2,127	35%
	Forest Plan Special Area	265	4%
Mink Creek	Backcountry Restoration	1,236	21%
	Forest Plan Special Area	4	<1%
Williams Creek	General Forest, Rangeland, and Grassland	313	5%
	Backcountry Restoration	316	5%
	Roadless Total	**4,261**	**71%**
	Project Area Outside of Roadless	**1,756**	**29%**
	Project Area Total	**6,017**	

Table 2: Idaho Roadless Areas that fall within the Strawberry Project Area.

Public Involvement

This section will be completed once scoping is completed.

Issues

Information and concerns from public and internal scoping will be considered in this section. The issues section will be completed once scoping is completed.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This section describes and compares the alternatives considered for the Strawberry Forest Management Project. It includes a description and map of each alternative considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative (i.e., helicopter logging versus the use of skid trails) and some of the information is based upon the environmental, social and economic effects of implementing each alternative (i.e., the amount of erosion or cost of helicopter logging versus skidding).

Alternatives

Alternative 1

No Action

Under the No Action alternative, current management plans would continue to guide management of the project area. No timber harvest or prescribed burning would be implemented to accomplish project goals.

Alternative 2

The Proposed Action

Approximately 2,658 acres (2,427 forested acres, 213 non-forested acres, and 19 woodland acres) within the project area are proposed to receive treatments that will move affected stands and the landscape as a whole toward desired conditions outlined in the Revised Forest Plan. These vegetation management treatments can be divided into three categories: harvest, mechanical and prescribed burn, and prescribed burn. These categories are described further below and displayed in Figure 2.

- Harvest, 283 forested acres. The treatment is designed to change species composition and reduce densities by removing merchantable size conifer trees that are not needed to meet desired stand conditions. Specifically, the treatment would shift species composition from conifer to aspen where aspen is present and would reduce conifer densities where aspen is absent. Commercial harvest operations will use ground based logging equipment (track & wheeled) and the whole tree skidding method.
    - The silviculture system that is proposed to guide the timber harvest is the selection system. The selection system is used to create uneven-aged stands (stands with 3 or more age classes) by reducing stand density enough to allow a new age class to develop (the Forest as a whole and this landscape is lacking seedling and sapling age classes). To reduce the stand to the desired density the surplus conifer trees from each age/size class would be cut, those of merchantable size would be harvested.

  - In addition to the commercial harvest proposed, other stand tending activities would occur on all 283 acres following the harvest operation. The tending activities could include pre-commercial thinning, weeding, piling, pile burning, jackpot burning, and chopping or mastication. The use of these tending activities will vary acre to acre across the harvest areas, and will depend on condition of the stands. Portions of some stands may not be treated and some acres may receive multiple treatments. The purpose of the tending activities is to reduce density, change species composition, decrease fuel loadings, rearrange forest material (trees, woody debris and brush) that are generally not merchantable size.
  - To facilitate the timber harvest, reduce watershed impacts, and provide for long term resource management needs, approximately 3.2 miles of system roads would need to be reconstructed. Reconstruction involves one or more of the following: blading, culvert installation, shaping for proper drainage, minor realignments, and adding gravel where needed. The system roads that are proposed for reconstruction are:
    - Mill Hollow Road, #444. Total miles of reconstruction 2.7.
    - Mill Hollow Spur Road, #743. Total miles of reconstruction 0.5.
  - To facilitate the timber harvest, approximately 1.8 miles of temporary road would need to be constructed (approximate locations are shown on the proposed action map). Additionally, skid trails and landings would also be developed within the units or in openings adjacent to them. Upon completion of the timber harvest, the temporary roads, landings, and skid trails would be closed and rehabilitated (more detail in design features section).

- Mechanical and Prescribed Burn, 1,373 forested acres. The treatment is designed to change species composition, reduce densities, and/or create a new age class (the Forest as a whole and this landscape is lacking seedling and sapling age classes) by cutting or burning conifer trees and some aspen that are not needed to meet desired stand conditions. Depending on existing stand condition, two different treatments will be applied to this category:
  - Aspen/Conifer stands (503 acres). These are aspen/conifer stands where aspen is succeeding to conifer. Broadcast burning would be implemented to kill the majority of the mature aspen and conifer in the stands and regenerate a new aspen age class. To facilitate burning operations, pre-burn slashing would occur to create fuel load conditions to meet objectives.
  - Aspen stands (866 acres). These are aspen dominated stands that have a small percentage of conifer occurring in the overstory and understory. The treatment is designed to maintain and/or increase aspen composition by reducing the conifer understory (curtailing succession). To accomplish this, all conifer that are less than 10 inches DBH would be hand felled. A jackpot burn would occur in areas where the cut conifers would provide an adequate fuel source.
- Prescribed Burn, 1,002 acres. This category includes three vegetation types which are forested (771 acres), non-forested (213 acres), and woodland (18 acres). The purpose of this treatment is to reintroduce fire into either conifer dominated stands or mixed stands

of aspen, mountain brush and scattered conifer in order to reduce densities , fuel loads, and to regenerate a new aspen age class where aspen is present. To accomplish this, a broadcast burn would be prescribed. The non-forested and woodland vegetation types are not targeted for treatment, however were included in this category due to the close proximity to the forested vegetation and may burn.

Proposed Action and Idaho Roadless Areas

No commercial harvest is proposed within any of the three Idaho Roadless areas (IRAs). Cutting of trees (pre-burn slashing) within the IRAs is proposed for the mechanical and prescribed burn treatment activity. No road construction, reconstruction, or temporary road construction would occur within the IRAs. The table below provides further information about the proposed activities and IRAs.

Proposed Vegetation Mgmt. Activities	Outside Roadless (Acres)	Liberty Creek IRA (Acres)		Mink Creek IRA (Acres)		Williams Creek IRA (Acres)	
		BRC	FPSA	BRC	FPSA	FPSA	GFRG
Harvest	283	0	0	0	0	0	0
Mechanical and Prescribed Burn	163	595	225	387	4	0	0
Prescribed Burn	57	66	1	250	0	316	313
Total	**503**	**661**	**226**	**637**	**4**	**316**	**313**

Table 3: Proposed activities acreage within and outside of the IRAs. BRC = Backcountry Restoration, FPSA = Forest Plan Special Area, GFRG = General Forest, Rangeland, and Grassland

Proposed Action and RFP Management Prescription

The proposed activities are within five of the RFP management prescription areas as displayed in the table below.

RFP Prescriptions & Codes	Proposed Vegetation Mgmt. Activities (Acres)			
	Harvest	Mechanical and Prescribed Burn	Prescribed Burn	Total
Visual Quality Maintenance 2.1.2 (b)	129	276	356	761
Semi-Primitive Motorized 3.2(b)	106	796	306	1,209
Semi-Primitive Restoration 3.3(b)	35	295	16	346
Forest Vegetation Management 5.2(b)	12	5	325	342
Concentrated Development Area - Utilities 8.1(u)	1			1
Total Acres	**283**	**1,373**	**1,002**	**2,658**

Table 4: Acreage of the proposed activities within the five RFP Management Prescription Areas.

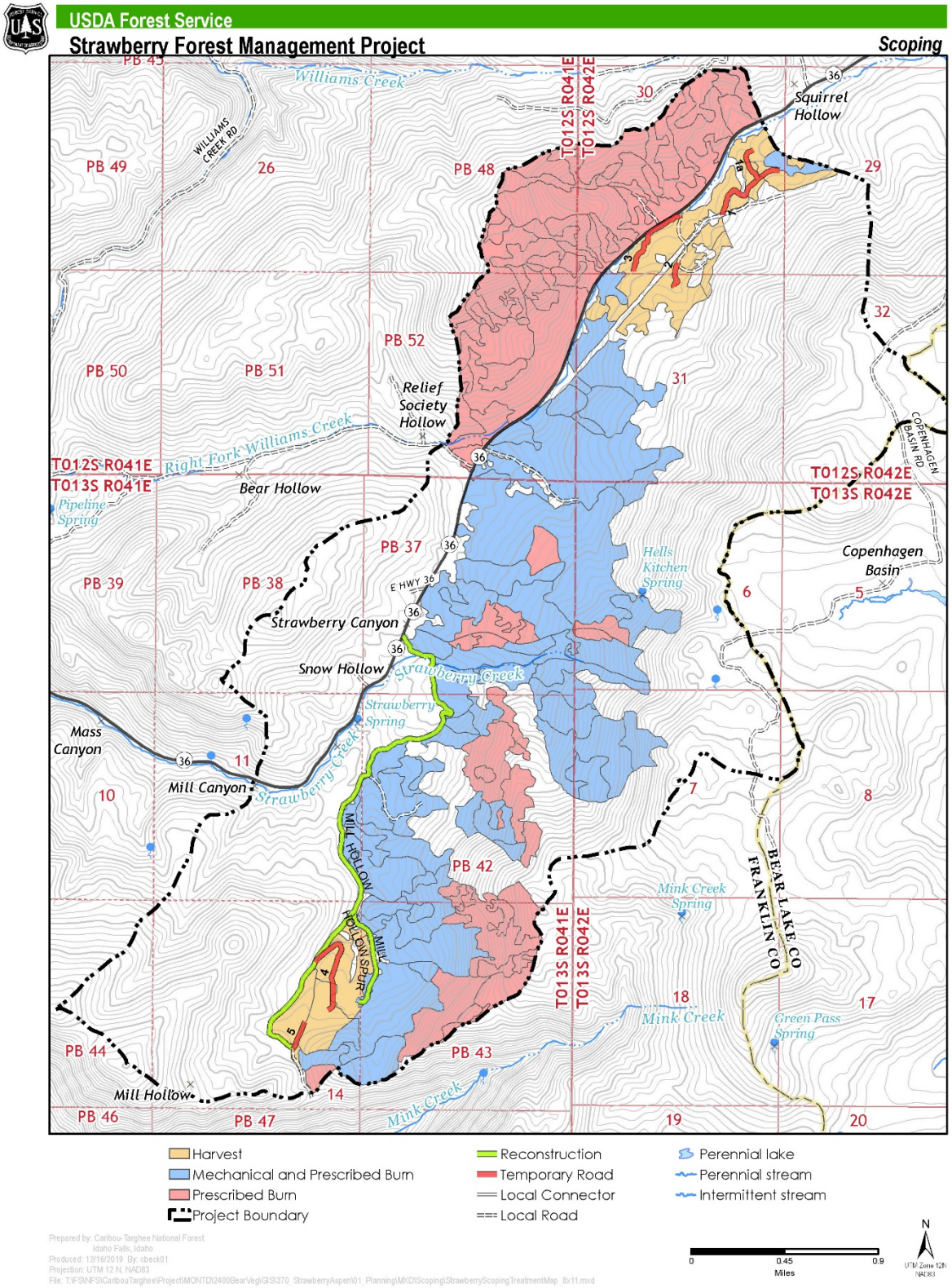

Figure 2. Alternative 2 Map

Design Features

This section outlines the design features that are common to all action alternatives. Design features are actions or management direction to be implemented, that have been identified by the IDT, to be implemented with the action alternatives to avoid or minimize potential adverse effects, and improve the project outcomes. The avoidance and effect minimization potential of these design features are considered and discussed in Chapter 4 (Environmental Consequences).

Timber Sale:

- A 2400-6T Timber Sale Contract (or equivalent) will be used to control timber sale harvest operations. This contract has standard contract provisions referred to as B provisions. The B5 section refers to transportation facilities. The B6 section refers to sale operations, and the B7 section refers to fire precaution and control. There are other sections of the B portion of the contract, but the ones listed above are the main sections that relate to effects and the design of this project. Each section has numerous provisions. For example, under the operations section (BT6.0) there is a provision called BT6.422 titled "Skidding and Yarding" and one called BT 6.6 "Erosion Prevention and Control." The intent here is not to repeat all of the contract provisions but to inform the reader that a detailed contract will be used. Some of the design features listed below are addressed by the standard B provisions of a timber sale contract. The timber sale contract also has C provisions. These provisions provide more specific requirements and are tiered off the corresponding B provision. The C provisions that will be added to the timber sale contract are listed as design features.

Forested Vegetation

- A silvicultural prescription will be developed for each stand that details the objectives of each stand and the treatments that will be used. The prescription may be refined and updated as needed.
- Stands planned for harvest treatments would be marked prior to sale. Stands would be marked in two ways. Some stands would have leave trees marked with orange paint and some would have cut trees marked with blue paint. Aspen will not be marked in either case and will not be included timber in the contract other than those that must be cut for skid trails and landings.
- The trees planned to be retained in stand after harvest will be considered leave trees. The leave trees will be arranged as individuals and/or groups of varying sizes and shapes irregularly arranged across the harvest units to provide protection and seed for natural regeneration. They would also function as green tree replacement snags, a reservoir for future large down woody material, vertical and visual diversity. The intent is to mimic the patch sizes and shapes that would be left unburned after a natural fire, for a given cover type and site.
- All commercial logging units would be yarded with ground based equipment such as tractors or rubber tired skidders. Whole tree skidding would be specified.
- Natural regeneration will be the primary means for creating the new age-class. No planting is planned, but may be used if monitoring indicates a need.

  - The logging operation should provide the necessary site preparation needed for regeneration while the reserve trees and the harvest unit edges would provide the seed sources for natural regeneration of conifers. Aspen regeneration would be from the existing root systems.
  - Some portions of stands may require jackpot burning to reduce fuels and expose enough soil to get regeneration, this will be determined after harvest.
  - If harvest and prescribed fire fail to produce adequate site preparation, scarification would be augmented by mechanical means (e.g. dozer with brush blade).
- Firewood, posts, and poles would be made available from the residue created by treatment activities. These will be made available only where practical, and to those with valid permits.
- Fencing would be an acceptable means to protect seedlings from herbivory if monitoring shows a need.
- Treatment units 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, firewood/post/pole gathering, motorized violations on closed roads within the project area, noxious weeds, livestock movements, and utilization and any natural events such as insect outbreaks.

Air Quality

- To meet air quality standards, burn plan(s) will be developed to comply with air quality regulations, and each firing operation will be approved by the Montana/Idaho Smoke Monitoring Unit.

Noxious Weeds

- To minimize the spread of noxious weeds, the purchaser would be required under standard contract provision, BT 6.35 Equipment Cleaning, to clean all logging and construction equipment that operates off-road prior to entry on the sale area.
- Weed-free straw or mulch will be required, if needed.
- All seed used shall be certified free of noxious weed seeds from weeds listed on the current *All states Noxious Weeds List*.
- Gravel/borrow material sources shall be monitored for noxious weeds and other invasive species, off forest sources shall be certified as noxious weed free.
- Monitoring and treating noxious weed populations will be given a high priority when developing KV plans.
- Forest best management practices and standard operating procedures will be used to treat weeds in the area as funds are available.
- Review known populations of noxious weeds, and if present within proximity to treatment, plan for out-year EDRR.

Hydrology & Soils

The following BMPs/design features follow guidance from the Idaho Forestry BMP Field Guide (2015), Caribou RFP (2003), FSH 2509.22 (1988), and National Best Management Practices for Water Quality Management on National Forest System Lands Volume 1: National Core BMP Technical Guide (2012).

- Retain coarse woody debris (CWD) (pieces of wood larger than 3" diameter) at 20 tons/acre in the timber harvest units. The minimum CWD for the forested habitat types present in the area is 15 tons/acre.
- Limit tractor skidding to slopes less than 40 percent (Guideline) (RFP 3-45). Also addressed in Idaho Forestry BMP Field Guide p. 101, and FSH2508.22 Practice 13.02 and 14.07.
- Yarding operations should not take place when ground conditions are wet enough that there is a risk of rutting and compaction as determined by the sale administrator (Guideline) (RFP 3-45). Also, detrimental soil disturbances such as compaction, puddling should be limited or mitigated to meet long-term soil productivity goals (Guideline) (RFP 3-6). Also supported by FSH 2508.22 Practice 13.06, and 14.12. Recommended voluntary BMPs based on the loam and silt loam mineral soil textures found in the timber harvest units include using slash mats and driving equipment in the unit when soils are dry (Idaho Forestry Best Management Practices Field Guide p. 40, 2015).
- Minimize skid trails and temporary roads during logging operations. Identify skid trails and temporary roads requiring construction in the sale planning process and assure appropriate rehabilitation of these trails by the purchaser or in post-sale activities (Guideline) (RFP 3-46). Also identify log landing locations and USFS and purchaser agree prior to construction (FSH 2509.22 Practice 14.10). Also, "detrimental soil disturbances such as compaction, puddling, displacement…should be limited or mitigated to meet long-term soil productivity goals" (Guideline) (RFP 3-6).
- Appropriate drainage features should be installed prior to the end of the season on temporary roads needed for more than one operating year. As the temporary roads are no longer needed, reclaim the disturbance by reducing compaction, pulling back any displaced material to approximate original contour and placing slash materials over bare soil (about 60% cover of logging slash). Reclaim landings and pile burn scars larger than 16' diameter using similar techniques. Seed as recommended by the Forest Botanist. This BMP is also recommended in FSH 2509.22 Practice 14.08, and 14.11, 14.15, and 14.18.
- As practical, aim to keep the forest floor intact and minimize displacement of topsoil. This will help meet guidelines (RFP, page 3-6 and 3-7), and Idaho Forestry Best Management Practices Field Guide recommendations p.40-41.
- Keep tractors out of wetlands and wet meadows (FSH 2509.22 Practice 13.03).

- Road re-alignment design, construction and maintenance will follow applicable FSH 2509.22 practices, Idaho Forestry Best Management Practices Field Guide, USDA FS National Best Management Practices for Water Quality Management on National Forest System Lands Volume 1, and Caribou Revised Forest Plan standards and guidelines.
- Acquire required Clean Water Act and Idaho state permits if needed.

Heritage Resources/Tribal Treaty Rights

- Avoid identified cultural resources determined eligible for listing in the National Register of Historic Places.
- If any additional cultural resources are encountered during the course of the project, the Forest Archaeologist would be notified immediately and all ground disturbing activities would cease in that area until the Forest Archaeologist takes appropriate action in consultation with SHPO and the Shoshone-Bannock Tribes.

Operating Season

- Logging operations would occur only when the soils are frozen or there is sufficient snow cover, or during the dry season when soils are not saturated to avoid adverse soil compaction (RFP 3-45).
- Mechanical treatments would be restricted in stands within an active goshawk territory as outlined in the RFP. (There are 235 acres of mechanical and prescribed burn treatment within the PFA of a historical nest site, so the mechanical portion of the treatment would be restricted until after September 1, if the site is occupied)
- Hauling on weekends should be avoided if possible to reduce conflicts with other Forest users.
- Hauling on popular holidays and opening day of general deer and elk season will be prohibited unless otherwise agreed in writing. CT6.312#

Wildlife

- The season prior to project implementation surveys for sensitive species, including, northern goshawk, three-toed woodpecker, boreal owl, great gray owl and flammulated owl would be conducted in suitable habitat, as per forest plan direction (RFP 3-25). If active territories or nests are located, follow forest plan direction and current policy for vegetation management and project activity around the appropriate protection area as outlined in the forest plan (RFP-27 through RFP 3-33).
- During project implementation, project personnel would report any nest found that may be active to the district wildlife biologist who would then review the status of the nest and, in coordination with the project leader, determine the most appropriate course of action to protect the nest (expected to consist of delayed project implementation).
- Snags within the units will be retained to the extent safety and feasibility will permit. If extensive mortality occurs in the future dead trees will only be cut if RFP snag requirements are being met within the unit. Hard snag densities should be left based on forest type and woodpecker biological potential as per forest plan direction (RFP 3-27).

- An average of 11 logs per acre in decomposition classes 1, 2 and 3 should be left on the ground as per forest plan direction (RFP 3-26).

Fuels/Prescribed Fire (Prescribed Burning)

- Prior to burning activities, a burn plan would be prepared and authorized by the District Ranger. This plan discusses lighting and holding strategies, contingency plans, equipment needs, personnel requirements, fire behavior predictions, smoke clearance, wild land fuel loads and models, and a range of weather conditions that guide the timing of the prescribed burn. Although the District Ranger has final approval authority for the burn plan, the Prescribed Fire Burn Boss has the responsibility to make the on-site, tactical, and the "go, no-go" decision. The Burn Boss ensures that all prescription, staffing, equipment, and other plan specifications are met before, during, and after the burn. Prescribed fire plans cannot be implemented when prescriptive elements have been exceeded.
- In order to meet air quality standards, the burn plan would be developed to comply with air quality regulations, and each firing operation must be approved by the Montana/Idaho Smoke Monitoring Unit to insure compliance and mitigate cumulative effects.
- Existing roads, trails and natural fuel breaks would be used as control lines where possible. Constructed firelines, if needed, would have erosion control structures (waterbars), constructed as needed. Firelines that could create motorized access would either be obliterated or made impassable after burning is completed.
- Fireline construction if needed would be accomplished with the smallest feasible equipment. Very little line construction is expected.
- Design prescribed fires to prevent excessive temperatures and loss of nutrients from volatilization (Region 1/Region 4 Soil and Water Conservation Practices Handbook, FSH 2509.22, 5/88, Practice 18.03).
- Plan prescribed fires for mostly low and moderate soil burn severity, as described in Parsons et al, 2010.
- Consider soil moisture, along with fuel moisture, before ignition.

Roads

- Road construction on Specified Roads shall include road realignment, surface maintenance & reconstruction, ditch maintenance & reconstruction, drivable dip installation, lead-off ditch installation, and spot graveling.
- Construction on Specified Roads shown on the Sale Area Map shall be done according to the FP-14 and Forest Service Supplemental Specifications.
- Roads shall be maintained in accordance with Road Maintenance Requirements in C5.31 and the Road Maintenance Specifications.
- The sale administrator or engineer will oversee all purchaser road work.
- Signs will be posted to warn public of construction work in the area. All signs must be manufactured & installed as specified in the FHWA "**Manual on Uniform Traffic**

Control Devices" (MUTCD) & FS publication "**Standards for Forest Service Signs & Posters**" (EM 7100-15).

Livestock Grazing

- Livestock grazing will be restricted in treatment units until silvicultural objectives have been met. This will be accomplished by a combination of rest/rotation and AOI (annual operating instruction) modifications. Site specific monitoring will be conducted to assure silvicultural objectives are met and to determine if any adaptive management strategies are required. (RFP 3-42).

Scenic Resource

Manage the visual landscape in accordance with the planned visual quality objective, as mapped in the Geographic Information System. Due to the nature of the terrain and landscape within this project area, most of the visual quality can be maintained through leaving a buffer area near highway 36 of existing natural vegetation. Activities in the foreground or readily visible from the highway should be kept at a minimum.

- Visual Quality Objective - Retention
    - Mechanical vegetation treatments will be designed to maintain a forested appearance.
    - Landings and temporary roads will be located as far away from highway 36 as possible.
    - Generally, slash piles will not be visible from the highway36, or evident to the casual Forest observer.
    - Prescribed burn areas where possible should mimic natural burn events and compose a mosaic landscape appearance.
- Visual Quality Objective - Partial Retention
    - Mechanical vegetation treatments will be designed to maintain a forested appearance.
    - Prescribed burn areas where possible should mimic natural burn events and compose a mosaic landscape appearance