

Chapter 1

Purpose and Need for Action

Document Structure

The Forest Service prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This EA discloses the direct, indirect, and cumulative environmental impacts that would result from the Proposed Action and the other alternatives.

The document is organized into three chapters followed by appendices.

Chapter 1. Purpose and Need for Action

This chapter includes information on the historical and existing resource conditions of the project area, the desired conditions of the project area, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also describes the decisions to be made.

Chapter 2. Alternatives, Including the Proposed Action

This chapter details how the Forest Service informed the public of the proposal and how the public responded. Alternative methods for achieving the purpose and need were developed and are described in this section. These alternatives were based on key issues raised by the Interdisciplinary (ID) Team, other agencies, and/or the public. This chapter also includes Design Criteria to reduce impacts to specified resources identified. Finally, this section provides summary tables of the environmental consequences associated with each alternative.

Chapter 3. Affected Environment and Environmental Consequences

Chapter 3 describes the existing condition and potential environmental effects of implementing the proposed action and the other alternatives. This chapter is organized by resource area.

Appendices

The appendices provide more detailed information to support the analyses presented in the EA. Included are a Monitoring Plan, Best Management Practices, Silvicultural Treatments, List of Preparers, Bibliography, and a glossary that defines abbreviations, acronyms, and terms used.

Project Area

The Porter Mount Management Project Area lies in the Island Unit Geographic Area of the Swan Lake Ranger District. This block of National Forest System (NFS) lands is detached from the rest of the Flathead National Forest and is surrounded by private ownership lands. The Porter Mount Management Project is located southwest of Kalispell, Montana, south of US Highway 2, east of Rogers Lake, northwest of Lake Mary Ronan, and west of Blacktail Ski Area (See Map 1-1, Vicinity Map). The Porter Mount Project Area (11,431 acres) includes 320 acres of private land. No other ownerships are included within the project area. Elevations within the project area range from 6280 feet at Haskill Mountain to 3440 feet close to Porter Creek.

Historical Condition

During the last century, fire and humans have greatly influenced the forests in these drainages. Since the 1940's fire suppression activities and logging changed the historic vegetative composition and pattern of these forests. Differing owners' management philosophies have changed the continuity, arrangement and composition of the forest in the Porter Mount Area.

Effective fire control has allowed many of the mature stands with large trees to become densely stocked with mid-story and understory shade-tolerant trees like Douglas-fir, subalpine fir, spruce, and grand fir trees. These intermediate and suppressed trees are growing into or underneath the crowns of the older and larger diameter Douglas-fir, western larch, and ponderosa pines. This situation creates "fuel ladders" that put these dominant trees at an increased risk should a fire occur. Other disturbance agents include insects, pathogens, wind and drought; however, they are more focused in isolated areas or specific conditions.

Historically, low intensity ground fires would have thinned out these shade-tolerant species in a mixed-severity fire regime. Currently, the closed forest canopy is shading shrubs, grasses, and forbs and reducing their vigor. These fire-dependent plants are associated with an open growing space. The shade tolerant trees are also more susceptible to insects and pathogens than seral species, especially in these densely stocked stands. Dead or diseased trees in a forest stand can increase the risk and severity of fire.

Existing Condition

The majority of the stands in the Porter Mount Area have an overstory of large diameter Douglas-fir, ponderosa pine and/or western larch. These trees are the remnants from past disturbances. The understories are dominated by lodgepole pine and Douglas-fir, ranging from sapling/pole size to small to medium sawtimber size classes. The understories are typically dense, with multiple canopy layers. Regeneration of ponderosa pine and western larch is rare, with the understories dominated by Douglas-fir and lodgepole pine. These understories are competing with, and provide ladder fuels and fuel loadings that have the potential to support stand replacing fires. Competition for moisture is reducing the vigor and resilience of the dominant overstory trees, resulting in poor growth, increased susceptibility to insects and disease, and increasing mortality.

Insect and disease conditions are endemic in the project area, with minor levels of mortality occurring, primarily in lodgepole pine and Douglas-fir. Mountain pine beetle infestations were experienced in the lodgepole pine in 1980 and 1981, and again between 1986 and 1989. Mortality levels were high in some localities, but not excessive across the project area as a whole, primarily due to the relatively young age and small size of the lodgepole pine. Mortality was limited to the patches and individual larger lodgepole pine trees, which were attacked and killed. These trees are now mostly on the ground, contributing to fuel loadings in a discontinuous pattern in the stands affected. Individual trees and small groups of trees within many stands continue to be killed by mountain pine beetle.

The lodgepole pine stands in the area are now mature and at the age of high risk for mountain pine beetle attack. The larger lodgepole pine is most vulnerable to attack, due to its thicker phloem which provides more favorable beetle habitat. The dense, small diameter and low vigor lodgepole is less vulnerable to beetle attack and mortality, though in periods of high epidemic population levels of beetles, these smaller trees can also be killed in very large numbers.

Many of the larger Douglas-fir trees throughout the project area are being affected by mistletoe and root rot, with individual trees and small groups of trees being killed. This condition is widespread throughout the project area. Trees susceptible to root rot are primarily Douglas-fir, and typically the larger diameter trees are affected first, spreading to younger trees that are

nearby with overlapping root systems. Root rot weakens the defense mechanisms of affected trees, which increases the risk of insect infestation, primarily by bark beetles. This risk is increasing in the area. Mistletoe in the Douglas-fir is scattered throughout the project area, and where past harvest activities have retained overstory Douglas-fir, these trees are heavily infected. The understories in these stands are dominated by Douglas-fir, and are highly susceptible to infection.

There are many younger trees in these mixed-conifers stands and their roots are located at the soil surface above the larger tree root masses. Due to fire exclusion, the forest nutrients are tied up in organic material and are released through slow decomposition processes. The feeder roots of the younger trees are more competitive than the older tree roots in gathering water and nutrients at the soil surface. This highly competitive situation results in drought-like conditions for the large trees. Mountain pine beetle, Douglas-fir bark beetle, and root rot can take advantage of trees stressed by a drought-like situation.

The greatest effect of fire suppression and exclusion in combination with other natural disturbance processes has been the accumulation of biomass in most unmanaged timber stands. The bulk of the biomass currently occupying the project area is in the form of dead standing and downed trees and shrubs, as well as live shade-tolerant firs, spruce, lodgepole pine, and Douglas-fir. The combination of dead fuel and continuous live vegetation from the forest floor to the upper forest canopy creates a fuel that, when ignited under severe fire conditions, would leave little or no surviving above-ground vegetation.

Wildland fires could still occur and may escape initial attack during severe fire conditions. The intensity of these fires would be dependent upon weather, fuels, and topography. When burning conditions are less than severe, fires may be of low to moderate severity and result in only moderate or no damage to overstory trees. If downed fuels are present, tree mortality can occur even during moderate burning conditions.

Desired Conditions

The desired future conditions described for the Forest Plan Management Areas (MA), in conjunction with the other Forest Plan direction outlined below, provide the parameters for identifying and defining project-specific desired future conditions. The following desired future conditions will help guide management of the project consistent with the Forest Plan, the key issues, and the ecological conditions of the project area:

- There is a diverse and healthy ecosystem that has been managed so forests are in a condition that they have the capacity for renewal and recovery from disturbances (healthy stand conditions, adequate seed sources, and productive soils).
- Fuel loads have been managed to reduce the risk of stand-replacement fires in stands adjacent to private property.
- Fire is being used to emulate its natural ecological role.
- Threatened, endangered, sensitive, and management indicator species habitat needs, as defined by research and science, have been met.
- Water quality effects from roads to streams, riparian areas, and wetlands have been reduced.
- Forest products and other economic opportunities related to the forest are made available to contribute to the local timber related economy.

Management Direction

The Forest Plan embodies the provisions of the National Forest Management Act (NFMA), its implementing regulations and other guiding documents. The Forest Plan details the direction for managing the land and resources of the Flathead National Forest. Where appropriate, the Porter Mount Management Project tiers to the Forest Plan Final Environmental Impact Statement, as described by 40 CFR 1502.20.

The Forest Plan provides forest-wide goals and objectives (pages II-1 through II-57).

The Forest Plan uses Management Areas (MAs) to guide management of NFS lands within the Flathead National Forest. Each MA provides for a unique combination of activities, practices, and uses.

Chapter Three of the Forest Plan contains a detailed description of each MA. A summary of the MA direction for the Porter Mount Project Area is provided in Table 3-3, of this EA, and Map 3-1.

Several plans and other regulations also provide context to the management direction for these lands. These include the National Fire Plan, the Flathead County Community Wildfire Fuels Reduction and Mitigation Plan, and the Healthy Forests Restoration Act.

Purpose and Need

Based upon the existing condition of the project area, the Swan Lake Ranger District ID Team has identified the following management activities to restore desirable vegetative conditions:

Forest Health

- Restore Forest Vegetation Health (restore historical tree species composition, structure, and pattern);
- Reduce the growing risk for insects and chronic disease infestation.

Hazardous Fuels Reduction

- Reduce the associated risk of high-severity landscape wildfire risk within the Wildland Urban Interface (as identified in the Flathead County Community Wildfire Fuels Reduction and Mitigation Plan).
- Increase the probability of stopping wildfires on NFS lands before they burn onto private lands.

Provide Commercial and Personal-Use Wood Products for the Local Communities

Proposed Action

The Swan Lake Ranger District ID Team has identified the following management activities to move towards the Purpose and Need for the Porter Mount Project Area:

- Mechanically treating **1,434 acres** of mature forest with commercial harvest prescriptions, using a combination of mechanized ground-based and cable logging systems. An estimated **15,368 CCF** (cubic hundred feet) or **8,634 MBF** (thousand board feet) of commercial timber products would be produced.
- One Clearcut with Reserve Trees Unit (Unit 31) would create an opening larger than 40 acres; four Seed Tree Units (Units 3, 17, 26, and 51) would create four openings slightly

- over 40 acres. Regional Forester approval of these openings over 40 acres would be required before making a final decision.
- Ecosystem burning on **128 acres** in Douglas-fir, larch, ponderosa pine, and lodgepole pine with mid-elevation shrub and grass fields;
 - Treating **1171 acres** in the Wildland Urban Interface (WUI).
 - Constructing **4.74 miles** of temporary road to access treatment units;
 - Applying Best Management Practices (BMPs) on approximately **61.46 miles** of temporary roads constructed and roads temporarily opened, as well as all system roads as requirements of the timber sale;
 - Constructing approximately **0.15 miles** of designated skid road to access treatment units;

Project Scope

Scope of the Proposed Action

The proposed action would result in timber sales anticipated to be sold in **2009**. It is anticipated that timber harvest would be completed within 2 to 3 seasons after the sale date. Implementation of road work associated with timber sales should begin once the project is awarded. Reforestation activities would be completed no more than 5 years after logging is completed. Management activities not involving timber harvest (Ecosystem Burning) could begin in 2008 and be completed by 2019.

Scope of the Analysis

The CEQ regulations implementing the NEPA require that all Federal agencies consider the following three types of actions to determine the scope of the analysis (40 CFR 1508.25).

Connected Actions

Connected actions include closely related actions that automatically trigger other actions that may require NEPA analysis; cannot or would not proceed unless other actions are taken previously or simultaneously; or are interdependent parts of a larger action and depend on the larger action for their justification. These actions are part of the proposed action and include all activities needed to complete the proposed project and provide for resource protection during and after project completion. Connected actions contained in the proposed action include but are not limited to:

- Post-timber sale activities (such as slash piling for hazard reduction and revegetation of disturbed areas);
- Watershed Best Management Practices (BMPs) described in Appendix B, and
- Project Design Criteria described in Table 2-14 associated with the action alternatives; and
- Tree planting and monitoring of reforestation success.

Similar Actions

Similar actions are actions with similarities to other actions that provide a basis for evaluating their environmental consequences, such as similar timing or geography. A number of these actions have been identified and evaluated in the analysis of environmental consequences (EA,

Chapter 3). These are current and reasonably foreseeable actions described in the following section on cumulative actions.

Cumulative Actions

Cumulative actions are past, present, and reasonably foreseeable actions that may have cumulatively significant impacts when considered with the proposed action. The effects of these actions on NFS lands have been evaluated in the environmental analysis of the proposed action and its alternatives. Actions considered in the cumulative effects analysis are presented in more detail in Chapter 3.

Decisions to be Made

The Responsible Official for this proposal is the Forest Supervisor of the Flathead National Forest. After the close of the EA review and comment period, the Forest Supervisor will consider comments submitted by the public, interested organizations, and government agencies (Federal, state, and local) and respond to these comments in the Decision Notice. She will decide whether and how to meet the Purpose and Need to improve forest health, reduce fuels, and provide wood products for local communities in Porter Mount Project Area. In addition, based on the findings on the EA, the Forest Supervisor will make the following decisions documented in the Decision Notice:

- The location, design, and scheduling of proposed activities, temporary road construction, and silvicultural practices;
- Design Criteria to protect or enhance resources;
- Specific project monitoring requirements needed to assure Design Criteria are implemented and effective.

Applicable Laws and Executive Orders

A partial list of Federal laws and Executive Orders pertaining to project-specific planning and environmental analysis on Federal lands follows. While most pertain to all Federal lands, some of the laws are specific to Montana. Disclosures and findings required by these laws and orders are contained in Chapter 3 of this EA.

- Multiple-Use Sustained Yield Act of 1960.
- National Historic Preservation Act of 1966 (as amended).
- National Environmental Policy Act of 1969 (as amended).
- Clean Air Act of 1970 (as amended).
- Endangered Species Act of 1973 (as amended).
- Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as amended).
- National Forest Management Act (NFMA) of 1976 (as amended).
- Clear Water Act of 1977 (as amended).
- American Indian Religious Freedom Act of 1980.
- Archeological Resource Protection Act of 1988.
- Cave Resource Protection Act of 1988.
- Executive Order 11593 (cultural resources).
- Executive Order 11988 (floodplains).

- Executive Order 11990 (wetlands).
- Executive Order 12898 (environmental justice).
- Executive Order 12962 (aquatic systems and recreational fisheries).

INFORMATION SOURCES

The analysis and decision processes for this project are based on the consideration of the best available science. The manner in which best available science is addressed can be found throughout the disclosure rationale found within the EA, Biological Assessments (BA), Biological Opinions (BO), and the Project File.

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