



**United States
Department of
Agriculture**

**Forest Service
Northern Region**

**Flathead National Forest
Glacier View Ranger District**

June 2004



Robert – Wedge Post Fire Project

Draft Environmental Impact Statement



Notes and Disclaimers to Reviewers

The USDA Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy, accurate only at certain scales based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Project Record Files – Additional documentation, reports and analysis referenced in this document can be found in the planning record files. These items have not been included in this document due to technical nature, excessive length, or are reference materials used to develop the analysis. All supporting documents in the project record are located at the Flathead National Forest, Hungry Horse/Glacier View Ranger District, PO Box 190340, Hungry Horse, MT 59919.

Robert-Wedge Post-Fire Project

Draft Environmental Impact Statement

**Flathead National Forest
Glacier View Ranger District
Flathead County, Montana**

June 2004

Lead Agency:	Responsible Official:	For Further Information, Contact:
USDA Forest Service	Cathy Barbouletos Forest Supervisor	Jimmy DeHerrera District Ranger
	Flathead National Forest	Hungry Horse/Glacier View Ranger Districts
		P.O. Box 190340
		Hungry Horse, MT 59919
		(406) 387-3800

Abstract: The Robert and Wedge Canyon Fires affected approximately 34,650 acres within the Flathead National Forest. This Draft Environmental Impact Statement discloses the environmental effects of activities proposed to recover merchantable wood fiber, and aid in the recovery of desired vegetation and site conditions within the fire areas. In addition to the no action alternative (Alternative 1), one proposed action alternative was identified and developed in a collaborative environment following the direction of the Flathead and Kootenai National Forest Rehabilitation Act. Activities in the proposed action include salvage harvest, beetle control, and native plant and tree planting. The alternative includes road management changes that would require a project specific amendment to the Flathead National Forest Plan standards for amendment 19.

Alternative 1 – No Action Alternative. No new activities would be initiated at this time.

Alternative 2 – Proposed Action. Robert Fire: Salvage of burned and beetle infested trees would occur on approximately 3,090 acres. An estimated 20 million board feet would be generated. Less than 1% (24 acres) of salvage is proposed in Management Area 12 and Inland Native Fish (INFISH) stream buffers, where salvage is allowed if riparian wildlife and fish values can be maintained or improved. Salvage proposals are emphasized within the areas of high burn severity (69% of the area proposed). Salvage is proposed to remove dead and dying trees that have been killed and damaged directly by the fire or infested with bark beetles. Approximately 0.8 miles of new temporary road would be constructed. Approximately 1.4 miles of existing road templates would be reopened and used as temporary. All of these roads would be stabilized and rehabilitated post harvest. Approximately 800 acres would be planted within salvage units.

Wedge Canyon Fire: Salvage of burned and beetle infested trees would occur on approximately 2,732 acres. An estimated 22 million board feet would be generated. Less than 1% (18 acres) of salvage is proposed in Management Area 12 and Inland Native Fish (INFISH) stream buffers, where salvage is allowed if riparian wildlife and fish values can be maintained or improved. Salvage proposals are emphasized within areas of high burn severity (60% of the area proposed). Salvage is proposed to remove dead and dying trees that have been killed and damaged directly by the fire or infested with bark beetles. Approximately 550 acres would be planted within salvage units.

Outside of proposed salvage units in both fire areas, planting of western larch, a combination of western larch and Engelmann spruce, whitebark pine, and a combination of western white pine, Engelmann spruce and native hardwoods/shrubs which could include willow, alder, cottonwood, buffalo-berry, and serviceberry. Depending upon the need, as determined by monitoring of beetle infestation levels, pheromone-baited spruce beetle funnel traps and trap trees would be applied to susceptible Engelmann spruce stands within the fire area.

Two project specific amendments to the Forest Plan are proposed to temporarily amend Forest Plan Amendment 19 total motorized access density and security core standards in the Canyon McGinnis Grizzly Bear Subunit to 33% and 53% respectively, and open motorized access density and security core standards in the Lower Whale Grizzly Bear Subunit to 37% and 47% respectively.

Summary: Robert-Wedge Post-Fire Project Draft EIS Findings

Introduction

This summary describes the project proposal presented in the Draft Environmental Impact Statement (DEIS).

Wedge Canyon Fire

The Wedge Canyon Fire started on the Glacier View Ranger District of the Flathead National Forest on July 18, 2003 as a result of a lightning storm. The origin of the lightning strike was on a ridge north of the headwaters of Teepee Creek, located approximately 40 miles north of Columbia Falls, Montana and six miles south of Canada. The fire was declared 100% contained in October of 2003.

Within the Wedge Canyon Fire 54,404 acres burned on Glacier National Park, Flathead National Forest, State of Montana, and private lands. Seven homes and 29 outbuildings were destroyed and one home was damaged.

Robert Fire

The human caused Robert Fire was discovered on the Glacier View Ranger District of the Flathead National Forest on July 23, 2004. The origin was approximately two miles west of the Glacier Rim Boat Ramp on the North Fork Flathead River, located approximately eight miles north of Columbia Fall, Montana. The fire was declared 100% contained in October of 2003.

Within the Robert Fire 52,874 acres burned on Glacier National Park, Flathead National Forest, and private lands. No residences or structures were lost.

Post Fire Rehabilitation Actions

Rehabilitation actions related to fire suppression tactics were initiated on both the Robert and Wedge Canyon Fires while the fires still burned.

Forest Service resource specialists began evaluating conditions in the fire project areas immediately following the fires. The Burned Area Emergency Rehabilitation (BAER) analyses compiled resource assessments on fire effects to soils, watersheds, vegetation, fisheries, and wildlife. Post fire inventories of forested stands collected data on stand mortality and salvage viability. The post fire assessments were completed by January of 2004, and the data was provided to the resource specialists for additional analysis in order to identify post fire conditions and provide rationale and recommendations for developing the proposed action. The Robert-Wedge Post Fire Project area includes all National Forest System lands affected by the Robert and Wedge Canyon Fires, in addition to private and State inholdings within the fire areas. Management activities described in the proposed action would occur on specified National Forest System lands within the boundaries of these two project areas.

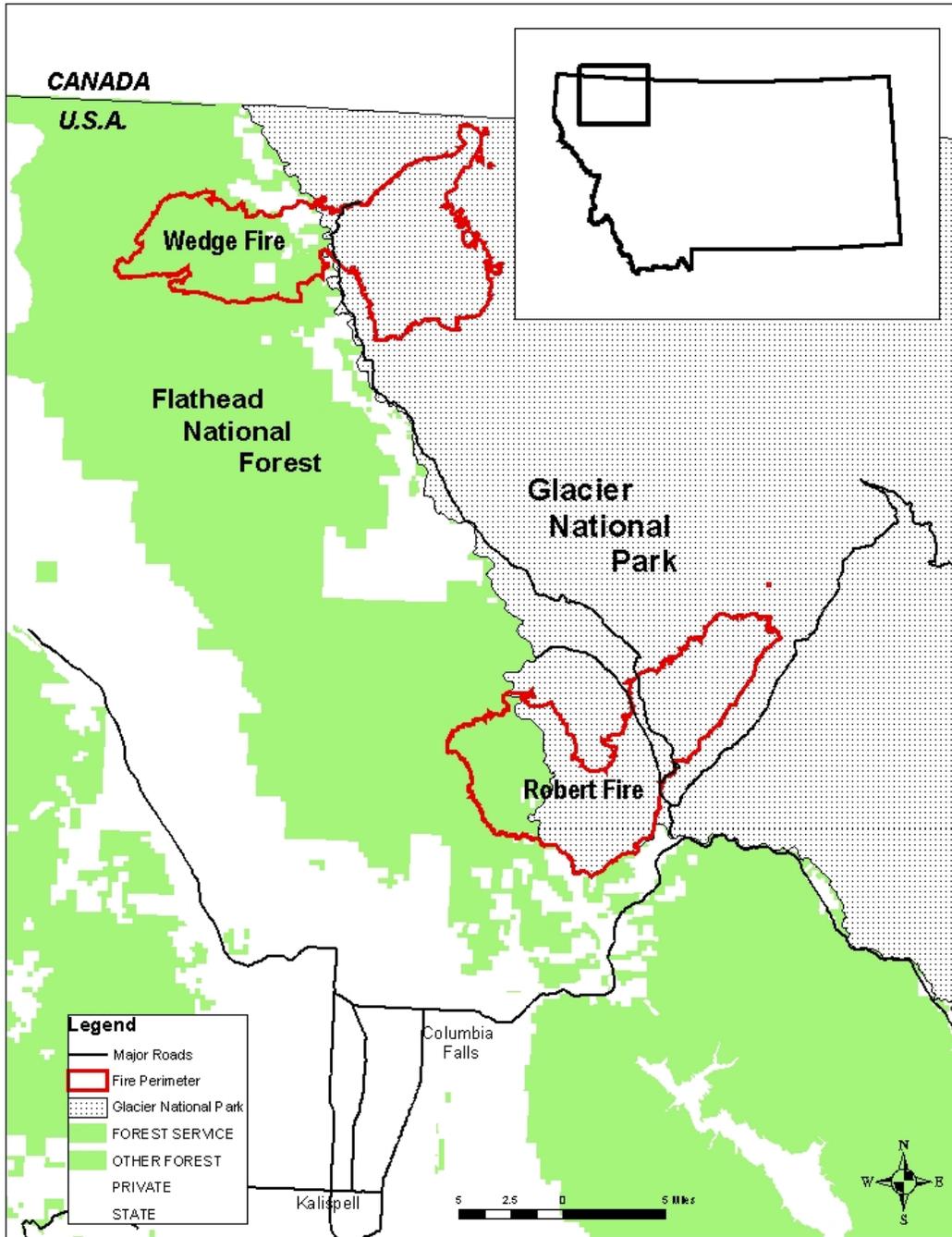


Figure 1. Project Vicinity Map.

The Flathead and Kootenai National Forest Rehabilitation Act

On November 10, 2003, President Bush approved special legislation attached to the Department of the Interior and Related Agencies Appropriations Act of 2004 identified under *Title IV – The Flathead and Kootenai National Forest Rehabilitation Act Public Law 108-108, HR 2691* (see Appendix A). The purpose of the Rehabilitation Act is to accomplish in a collaborative environment, the planning and rehabilitation of the Robert and Wedge Canyon Fires.

Purpose and Need

The purpose of this project is to salvage trees and rehabilitate lands within the Flathead National Forest administered portion of the Robert and Wedge Canyon fire areas as specified within the Flathead and Kootenai National Forest Rehabilitation Act. The need for action is to:

1. Recover merchantable wood fiber affected by the Robert and Wedge Canyon Fires in a timely manner to support local communities and contribute to the long term yield of forest products

This need for action is driven by management direction or more specifically goals/desired future conditions, as defined by the Flathead National Forest Land and Resource Management Plan, hereafter known as the Forest Plan. According to the Forest Plan, one of these desired conditions is to provide a predictable and sustainable supply of timber products that is responsive to local industry and economies, consistent with other Forest management goals, objectives and standards (p. II-5, Forest Plan).

Merchantable timber is located within the two fire areas. However, due to expected rapid decay rates of fire-affected trees, timely harvest is essential to ensure their merchantability. Trees killed by the fire or by subsequent beetle outbreaks will lose a portion of their economic value as sawlogs each year following the fires. As a result, sawlog volume will decrease steadily over the next four years, with much of the small sawlog volume losing its value in one to two years following the fire. Larger trees and stands that experienced less intense or severe fire will likely remain merchantable longer, but they will also lose economic value over time as significant defects develop, resulting in substantial loss of value.

Some of the merchantable timber within the fire areas is included in Management Areas the Forest Plan has deemed as suitable for long-term timber management or where salvage can occur as long as specific resource values can be protected, enhanced, or maintained. The majority of proposed salvage areas are located in management area (MA) 15 which emphasizes timber management where economical and feasible as its primary goal. Other proposed salvage areas are located in MAs which allow for long-term timber management or allow for salvage logging. More detailed information regarding MAs and proposed salvage areas is provided in Chapter 2.

2. Implement activities within the fire areas that will aid in the recovery of desired vegetation and site conditions

There is a need to accelerate the recovery of habitats that were eliminated or altered by the Robert and Wedge Canyon Fires. There is a high degree of concern that areas are restored to meet multiple objectives after a wildfire. Section 402 of the Flathead and Kootenai National Forest Rehabilitation Act, states that the Robert and Wedge Fires of 2003 caused extensive resource damage and the rehabilitation and recovery of burned areas needs to be completed in a timely manner in order to reduce long-term environmental impacts.

As a result, there is a need to plant native tree seedlings such as whitebark pine, western white pine, western larch, and Engelmann spruce and native shrubs in areas that are too far from seed sources and where natural regeneration may be slower than desired. There is also a need to plant native species such as western larch in areas where lodgepole pine may out compete or is in overabundance, thus preventing desired species diversity.

In addition, there is a need to study the effects of vegetation recovery/huckleberry production by light soil scarification and slashing of unmerchantable woody material.

There is a need to reduce the spread of Douglas-fir bark beetle and spruce beetle in areas where live green trees remain within the fire areas that are vulnerable to infestation and mortality. Reducing the potential spread of beetles to green stands outside the fire areas is also a concern. Bark beetles will emerge from infested trees in the spring of 2004 and 2005. Both would search for the nearest source of food and breeding habitat. There is an estimated 2,000 acres of live green trees in the Robert Fire area and 2,500 acres in the Wedge Canyon Fire area, in addition to scattered live trees throughout the rest of the burned areas. These remaining live trees are of high value, providing wildlife habitat, forest structural diversity, seed sources, and site protection.

Road management actions associated with this project

The proposed action also includes road closures and road decommissioning to provide for more secure habitat for grizzly bears. In February of 1995, Forest Plan Amendment 19 established forest wide objectives and standards for grizzly bear security to meet long term conservation needs of this threatened species. Standards were established for open motorized access density, total motorized access density and security core area in designated grizzly bear subunits.

The Robert Fire affected three grizzly bear subunits (Canyon McGinnis, Cedar-Teakettle, and Lower Big Creek), of which Canyon McGinnis does not currently meet or have decisions that would address Forest Plan standards. The Wedge Canyon Fire affected four grizzly bear subunits (Ketchikan, Upper Trail, Upper Whale Shorty, and Lower Whale) of which Lower Whale does not meet Forest Plan standards.

The proposed changes to road access do not meet current Forest Plan standards related to Amendment 19. As a result, project-specific amendments are proposed for both the Canyon McGinnis and Lower Whale grizzly bear subunits. Chapter 2 of the DEIS describes in detail the road access actions proposed within this project as well as the project-specific amendments.

Public Involvement

On January 30, 2004, a scoping letter detailing a proposed action for an Environmental Impact Statement was mailed to approximately 260 individuals, organizations and government agencies that have previously indicated an interest in receiving notification of proposed activities on the Hungry Horse and Glacier View Ranger Districts. A legal notice soliciting public comments was published in the Daily Inter Lake Newspaper on January 30, 2004. A second legal notice soliciting public comments was published in the Daily Inter Lake Newspaper on February 4, 2004, and a corrected Legal Notice was published in the Daily Inter Lake Newspaper on February 10, 2004. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published in the Federal Register on January 30, 2004. Concurrently, several news releases pertaining to the proposed action as well as ongoing fire rehabilitation activities independent of this proposed action were sent to the local

news media for publication and broadcasting throughout Northwest Montana. Numerous articles were published in the Daily Inter Lake, Hungry Horse News, and the Missoulian newspapers. Local television and radio stations also aired several stories about the proposed project as well as ongoing post fire activities.

The Robert Wedge Post Fire Project proposal was included in the Flathead Forest's Schedule of Proposed Actions (SOPA) that was published in the Daily Inter Lake on February 4, 2004. The Flathead National Forest hosted an open house on February 17, 2004 in Kalispell, Montana to share information, answer questions and accept comments for this proposed action and the proposed action for Westside Reservoir Post-Fire Project. Approximately 80 individuals attended. Forest Service personnel met with representatives of the following interest groups; Flathead Forestry Project, Swan View Coalition, and the Montana Logging Association. In addition, Forest Service personnel attended a biannual meeting with the North Fork Interlocal group in 2004 to discuss activities in the North Fork, including this proposed action. Forest Service personnel have also responded to specific information requests by individuals on the Proposed Action in various forms (letters, email, phone calls).

Approximately 80 responses were received. Comments pertinent to the project proposal have been included for consideration for the proposed action. Comments not related to this project proposal were deemed outside the project scope and are not included in this analysis. During the month of February 2004, an independent questionnaire/survey developed by Rep. Verdell Jackson was sent to the participants of the collaboration workshop held in January of 2004. Of the 88 participants, 51 returned the survey of which the results were tabulated by the Flathead Chamber of Commerce.

Comments not related to this project proposal were deemed outside the project scope and are not included in this analysis. The Forest Service responded to everyone who commented with a letter of appreciation.

Other Related Efforts

The Flathead and Kootenai National Forest Rehabilitation Act directs the Flathead National Forest officials to complete the environmental analysis for the Robert and Wedge Canyon Fires through a collaborative community process. The Flathead National Forest submitted notices on November 30, December 1, and 2, of 2003 in the Daily Inter Lake Newspaper and local radio/television stations requesting individuals to participate in work group meetings during the period of January 5-10 of 2004 to develop management options for restoration and timber salvage projects in the Robert and Wedge Fires. Concurrently, several news releases discussing the development and progress of the collaboration process were sent to the local news media for publication and broadcast in northwest Montana throughout January and February of 2004.

One hundred and eight individuals signed up to participate. Participants were encouraged to commit to attending the four work group meetings during the week of January 5. A total of 88 individuals representing diverse interests committed and were randomly divided amongst eight smaller working groups. The goal for each working group was to first develop ideas for restoration, salvage, and road management activities within the two fire areas, then consolidate their ideas with those of the other working groups, and eventually as an entire group identify what all could agree upon through the consensus process defined in the introduction letter mailed out to participants on December 23, 2003.

As a result, the following statements guided the development of the proposed action:

- Coordinate salvage entries with other rehabilitation treatments

- Protect sites as necessary with horizontal placement and retention of wood debris
- Complete salvage harvest in a timely manner to maximize economic return
- Use best management practices to minimize soil erosion and protect water quality
- Where Inland Native Fish Strategy rules can be met in riparian areas, allow salvage, restoration, rehabilitation, and reforestation

Issues

The interdisciplinary team reviewed and compiled a list of potential issues based upon comments from the public, organizations, and government agencies.

Under the Flathead and Kootenai National Forest Rehabilitation Act, if an EIS is required, the Flathead National Forest shall not be required to study, or develop, or describe any alternative to the proposed agency action. With the legislation not requiring any alternatives to the proposed action, it is imperative that the agency clearly describe and evaluate the context of the issues and their associated effects within the DEIS. This ensures that the decision maker and the public clearly understand the issues and their effects. The following issues are addressed in the DEIS:

Unroaded areas – Proposed salvage may compromise values of these unroaded areas; creating habitat fragmentation, impacts to recreational opportunities, and the loss of unique ecological values.

Management Areas unsuitable for long-term timber production – Some of the proposed salvage occurs within Forest Plan management areas that are not designated for long term timber management. There is concern that salvage harvest may affect other resource values.

Down wood and snag habitat – Proposed salvage may affect post fire habitat for wildlife. There is a potential lack of both large live and dead trees critical to some wildlife species and for other ecosystem functions and recovery. There is also a concern for protecting the “structural integrity” of burned late seral/older forests.

Economics – The logging systems proposed for salvage may affect the value of timber sale contract(s).

Road closures and road decommissioning – Proposed road closures and decommissioning within the Lower Whale and Canyon McGinnis Grizzly Bear Subunits would not entirely meet existing Forest Plan standards and may affect grizzly bear habitat. There is also a concern that proposed road closures may affect motorized forest access for the public.

Site productivity – Proposed salvage on burned soils could result in increased surface erosion, soil displacement, and soil compaction. Removal of large wood material (both standing and down) could also affect site productivity within salvage units.

Water quality and fisheries- Proposed salvage, rehabilitation and road access management actions may increase sediment to streams and may affect water quality and fish habitat. Removal of large wood material close to riparian areas may affect future sustainable levels of large woody debris in streams.

Noxious weeds- Proposed salvage, rehabilitation, and road access management actions may facilitate the spread of noxious weeds.

Alternatives

Alternative 1 – No Action

This alternative represents the existing condition against which the Proposed Action alternative is compared. Under this alternative, none of the specific activities proposed would occur. No salvage and associated activities, road management changes, planting and site restoration activities to aid in vegetation recovery, and pheromone-based beetle management treatments would occur. Ongoing activities such as recreation, public firewood gathering, fire suppression, and normal road maintenance would continue. Activities identified as ongoing and foreseeable actions would occur.

Alternative 2 – Proposed Action

Salvage Harvest

Robert Fire

Salvage of burned and beetle infested trees would occur on approximately 3,090 acres. An estimated 20 million board feet would be generated.

Less than 1% (24 acres) of salvage is proposed in Management Area 12 and Inland Native Fish (INFISH) stream buffers, where salvage is allowed if riparian wildlife and fish values can be maintained or improved. Proposed salvage is located within an INFISH stream buffer area on the upslope side of the currently yearlong open McGinnis Creek Road #803. Only upslope vegetation is proposed for salvage since the riparian buffer is bisected by the road.

Salvage proposals are emphasized within the areas of high burn severity (69% of the area proposed is in high burn severity). Salvage is proposed to remove dead and dying trees that have been killed and damaged directly by the fire or infested with bark beetles. Individual live trees may need to be designated for cutting to develop safe log landing areas, or for other safety considerations. These trees would be left on site as downed wood material except in landing areas. Snag and down wood retention prescriptions are identified.

Harvest would be accomplished with helicopter yarding, cable yarding, and tractor yarding. Approximately 30 helicopter landings of ½ to 2 acres in size would be constructed and rehabilitated. Approximately 0.8 miles of new temporary road would be constructed. Approximately 1.4 miles of existing road templates would be reopened and used as a temporary road. All of these roads would be stabilized and rehabilitated post harvest.

Following salvage activities, regeneration surveys would occur for each harvest unit to verify possible reforestation needs. The best available information for the DEIS anticipates approximately 800 acres would be planted within salvage units.

Wedge Canyon Fire

Salvage of burned and beetle infested trees would occur on approximately 2,732 acres. An estimated 22 million board feet would be generated.

Less than 1% (18 acres) of salvage is proposed in Management Area 12 and Inland Native Fish (INFISH) stream buffers, where salvage is allowed if riparian wildlife and fish values can be maintained or improved. Proposed salvage is located within an INFISH stream buffer area on the upslope side of the Teepee Creek Road #907. Only upslope vegetation is proposed for salvage since the riparian buffer is bisected by the road.

Salvage proposals are emphasized within areas of high burn severity (60% of the area proposed is in high burn severity). Salvage is proposed to remove dead and dying trees that

have been killed and damaged directly by the fire or infested with bark beetles. Individual live trees may need to be designated for cutting to develop safe log landing areas, or for other safety considerations. These trees would be left on site as downed wood material except in landing areas. Snag and down wood retention prescriptions are identified. Winter logging is proposed for approximately 810 acres to address wildlife and soils concerns.

Harvest would be accomplished with helicopter yarding, cable yarding, and tractor yarding. Approximately 15 helicopter landings from ½ to 2 acres in size would be constructed and rehabilitated. To access harvest units approximately 1.2 miles of new temporary road would be constructed. Approximately 2.2 miles of existing road templates would be reopened and used as a temporary road. All of these roads would be stabilized and rehabilitated post harvest.

Following salvage activities, regeneration surveys would occur for each harvest unit to verify possible reforestation needs. The best available information for the DEIS anticipates approximately 550 acres would be planted within salvage units.

Rehabilitation

Outside of proposed salvage units, planting of western larch, a combination of western larch and Engelmann spruce, whitebark pine, and a combination of western white pine, Engelmann spruce and native hardwoods/shrubs which could include willow, alder, cottonwood, buffalo-berry, and serviceberry.

Depending upon the need, as determined by monitoring of beetle infestation levels, pheromone-baited spruce beetle funnel traps and trap trees would be applied to susceptible Engelmann spruce stands within the fire area.

The salvage of moderate to high spruce beetle susceptible stands would also help reduce potential increases in spruce beetle populations.

Use of MCH, a pheromone-based beetle attractant, may also be used in site-specific, localized areas to protect identified high value live Douglas-fir trees from beetle infestation. These areas will be identified by field reconnaissance in the summer of 2004.

Amendment 19 Road Management

The Canyon McGinnis Grizzly Bear Subunit in the Robert Fire area does not currently comply with any of the ten-year access density or security core standards. The Lower Whale Grizzly Bear Subunit in the Wedge Canyon Fire area does not currently comply with the ten-year access density standards for open motorized access density and security core.

A project specific amendment to the Forest Plan is proposed to temporarily amend A19 total motorized access density and security core standards in the Canyon McGinnis grizzly bear subunit to 33% and 53% respectively. Another project specific amendment to the Forest Plan is also proposed to temporarily amend open motorized access density and security core standards in the Lower Whale grizzly bear subunit to 37% and 47% respectively (see Table 1 below). Road closures and decommissioning included in this alternative would meet the Forest Plan standards for grizzly bears, as amended.

These project specific amendments would remain in place pending revision of the Forest Plan which is targeted for completion in 2006. The revision process is currently ongoing and grizzly bear standards are being reviewed and potentially may be modified as a result of ongoing population studies.

Table 1. Comparison of Existing A19 Standards, the Proposed Action, and the Forest Plan.

Canyon McGinnis Grizzly Bear Subunit	Current Condition	Forest Plan Standard	Proposed Action *Forest Plan Amendment
Open Motorized Access Density	22%	19%	19%
Total Motorized Access Density	41%	19%	33% *
Security Core	38%	68%	53% *
Lower Whale Grizzly Bear Subunit	Current Condition	Forest Plan Standard	Proposed Action *Forest Plan Amendment
Open Motorized Access Density	43%	19%	37% *
Total Motorized Access Density	16%	19%	16%
Security Core	45%	68%	47%*

Yearlong road restrictions, using gates, road berms, and road decommissioning would reduce road densities, increasing grizzly bear habitat security. Road decommissioning would include actions to minimize the potential for future sedimentation of streams or noxious weed development. These actions would include placement of waterbars, culvert removals, grass seeding, slash or debris placement on roads, planting of shrubs and/or physical alteration of the road template.

Approximately 5 miles of open yearlong/seasonally open road would be closed yearlong to wheeled motorized vehicles within these two grizzly bear subunits.

One of the more prominent open road changes in the Lower Whale grizzly bear subunit would be a closure to wheeled motorized vehicles by a berm on Road #9805, located just past the trailhead to the Hornet Lookout. In addition, an open road that accesses state land would be closed yearlong with a gate.

Changes to open roads in the Canyon McGinnis subunit include a seasonal restriction to wheeled motorized vehicles on the McGinnis Creek Road #803 (would be open to wheeled motorized vehicles from July 1 to November 30), a yearlong closure to a portion of the Kimmerly Creek Road #316B, and a yearlong closure to a small access road to a former post and pole area adjacent to the North Fork Flathead River.

In addition to changes to open roads, approximately 15 miles of road would be decommissioned within the Canyon McGinnis subunit.

Comparison of Alternative Components

Table 2 summarizes the main features of the two alternatives. Table 3 compares the existing, proposed, and Amendment 19 travel management. Table 4 compares snag retention by alternative.

Table 2. Comparison of Alternatives by Features.

Features (Purpose and Need and associated Relevant Issues)	Alternative 1 No Action	Alternative 2 Proposed Action

Features (Purpose and Need and associated Relevant Issues)	Alternative 1 No Action	Alternative 2 Proposed Action
Recover Wood Fiber	0	Robert Fire 3,090 acres – 20 MMBF
		Wedge Canyon 2,732 acres – 22 MMBF
Logging Systems	0	Robert Fire Helicopter- 1,576 acres Cable – 720 acres Tractor – 794 acres
		Wedge Canyon Fire Helicopter – 1,108 acres Cable – 243 acres Tractor – 1,380 acres
Associated Road Work	0	Robert Fire 2.2 miles temporary road
		Wedge Canyon Fire 3.4 miles temporary road
Effects on Job Growth/Year	0	626 jobs
Effects on Income	0	+\$10,991,811
Salvage Proposed in Uninventoried Unroaded Areas	0 Acres	Robert Fire – 0 Acres Wedge Canyon Fire – 940 Acres The Unroaded Areas are surrounded by existing roads, not adjacent or contiguous with existing Inventoried Roadless Areas, and have had past vegetation management activities. These areas would likely have a low probability for inclusion into the wilderness system due to low manageability and limited wilderness values
Dead Tree Retention In Salvage Units see Table 4 below		

Features (Purpose and Need and associated Relevant Issues)	Alternative 1 No Action	Alternative 2 Proposed Action
Salvage Proposed in MA 2A, 2B, 3, and 12 (includes INFISH boundaries) which are Unsuitable for Long-Term Timber Production	0	Robert Fire– MA2A=123 acres helicopter MA3=333 acres helicopter, 30 acres cable, 22 acres tractor MA12=18 acres tractor
		Wedge Canyon Fire - MA2A= 73 acres helicopter MA2B=56 acres helicopter, 2 acres tractor MA3= 190 acres helicopter, 3 acres cable, 3 acres tractor MA12= 19 acres helicopter, 5 acres tractor 90% is to occur with helicopter systems, Project design Features described in Section 2.4 address maintaining resource amenity values including wildlife, hydrology, fish, dispersed recreation, visuals and soils.
Invasive Plants	Lower Risk due to less acres disturbed	Higher vulnerability to weed spread and colonization.
Fisheries –INFISH Habitat -Riparian Management Objectives include (large woody debris, water temperature, sediment)	NA	No large woody debris to be removed from stream networks. Compliant with INFISH Riparian Management Objectives
Hydrology/Soils- Potential Sediment Yield Increase	Robert Fire- 66,858 tons	Robert Fire – Increase of 1,382 Tons to 68,220 tons
	Wedge Canyon Fire- 85,646 tons	Wedge Canyon Fire - Increase of 264 tons to 85,910 tons
Hydrology/Soils – Potential Water Yield Increase	Existing Post Fire Condition	No Change
Hydrology/Soils – Potential Nutrient Yield Increase	Existing Post Fire Condition	Slight increase above Post Fire. No water quality effects to the North Fork River.
Soils- Total Acres and (% detrimental soil disturbance)	Robert Fire - 3,750 acres (13%)	Robert Fire - 4,108 acres (14%)
	Wedge Canyon Fire 6,148 acres (6.5%)	Wedge Canyon Fire 6,555 acres (8%)

Table 3. Comparison of Existing, Proposed, and A19 Travel Management.

Travel Management Status	Existing Estimated Miles¹ Road Density (%)	Proposed Action¹ Estimated Miles, Road Density (%)
CANYON MCGINNIS GRIZZLY BEAR SUBUNIT		
Open Yearlong	16 miles	9 miles
Open Seasonally	10 miles	14 miles
Closed Yearlong/Berm	36 miles	42 miles
Closed Yearlong/Gate	32 miles	16 miles
Closed Yearlong/Natural revegetation	12 miles	11 miles
To be decommissioned	0 miles	15 miles
County/city/highways	8 miles	8 miles
Small private	4 miles	4 miles
TOTAL	118 miles	119 miles
Open Motorized Access Density	22%	19%
Total Motorized Access Density	41%	33% ²
Grizzly Security Core	38%	53% ²
LOWER WHALE GRIZZLY BEAR SUBUNIT		
Open Yearlong ³	20 miles	18 miles
Open Seasonally	2 miles	2 miles
Closed Yearlong/Berm	8 miles	11 miles
Closed Yearlong/Gate	3 miles	3 miles
Closed Yearlong/Natural revegetation	0.5 miles	0.5 miles
Closed Yearlong Sign	2 miles	0 miles
To be decommissioned	7 miles	7 miles
County/city/highways	6 miles	6 miles
Small private	5 miles	5 miles
TOTAL	53 miles	53 miles
Open Motorized Access Density	43%	37% ²
Total Motorized Access Density	16%	16%
Grizzly Security Core	45%	47% ²
Amendment 19 Standards	5 year	10 year
Open Motorized Access Density (<1 mi/mi ²)	≤19%	≤19%
Total Motorized Access Density (<2 mi/mi ²)	≤24%	≤19%
Grizzly Security Core	≤64%	≤68%

¹ Includes other ongoing activities

² Forest Plan Amendment

³ Road 9805 (Hornet Lookout Road) occurs in both the Lower Whale and Upper Trail grizzly bear subunits. Approximately 1 mile of the road occurs in the Upper Trail subunit. Since this is the only road proposed for closure to wheeled motorized access in this subunit, the 1 mile portion of the road is being added to the open yearlong miles in the Lower Whale subunit.

Table 4. Fire Severity and Snag Retention by Alternative.

	Robert		Wedge	
	Alternative 1	Alternative 2	Alternative 1	Alternative 2
Potential Habitat Burned at High or Moderate Severity	7,261 acres	7,261 acres	13,337 acres	13,337 acres
Snag Patches > 74 Acres¹				
Acres of Patches	7,054 acres	3,779 acres	12,557 acres	10,006 acres
Number of Patches	4	4	4	7
% Snag Patches Retained	100%	54%	100%	80%
Snag patches > 956 Acres²				
Acres of Patches	6,471 acres	3,367 acres	11,812 acres	8,204 acres
Number of Patches	1	2	2	2
% Snag Patches Retained	100%	52%	100%	69%

¹ (Saab 2002)

² (Wisdom 2000)

Table of Contents

Summary

CHAPTER 1: PURPOSE AND NEED FOR ACTION.....	1
1.1 Organization of this Document.....	1
1.2 Background	1
1.2.1 Post Fire Rehabilitation Actions.....	2
1.2.2 Post Fire Assessments	3
1.2.3 The Flathead and Kootenai National Forest Rehabilitation Act	4
1.2.4 Project Area.....	4
1.3 Purpose and Need.....	8
1.4 Project Scope.....	10
1.5 Flathead National Forest Plan Direction.....	10
1.6 Public Involvement	13
1.7 Issues	15
1.8 Decisions to be Made	16
CHAPTER 2: ALTERNATIVES.....	18
2.1 Introduction.....	18
2.2 History and Process to Formulate the Alternatives.....	18
2.3 Alternatives Considered In Detail	18
2.3.1 Alternative 1 – No Action	18
2.3.2 Alternative 2 – Proposed Action	19
2.4 Management Practices – Project Design Features for the Proposed Action.....	26
2.5 Mitigation Measures for the Proposed Action.....	31
2.6 Monitoring of Project Activities	32
2.7 Comparison of Alternative Components.....	33
2.8 Identification of the Preferred Alternative.....	37
CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	49
3.1 FIRE AND FUELS	49
3.1.1 Analysis Area	49
3.1.2 Regulatory Framework.....	49
3.1.3 Affected Environment	50
3.1.4 Environmental Consequences.....	56
3.2 FOREST VEGETATION.....	62
3.2.1 Introduction	62
3.2.2 Past, Ongoing, And Foreseeable Actions	67
3.2.3 Affected Environment	69
3.2.4 Environmental Consequences.....	101
3.2.5 Cumulative Effects	131
3.3 WILDLIFE.....	138
3.3.1 Introduction	138
3.3.2 Affected Environment	139
3.3.3 Environmental Consequences.....	149
3.4 THREATENED AND ENDANGERED TERRESTRIAL WILDLIFE SPECIES	239
3.4.1 Introduction	239
3.4.2 Affected Environment	241
3.4.3 Environmental Effects.....	255
3.4.4 Cumulative Effects	274
3.4.5 Multi-Scale Assessment	281
3.4.6 Consistency With Forest Plan.....	283
3.5 HYDROLOGY	285

Robert-Wedge Canyon Post-Fire Project Draft EIS

3.5.1	Introduction.....	285
3.5.2	Affected Environment.....	286
3.5.3	Environmental Consequences.....	319
3.5.4	Regulatory Framework and Consistency.....	344
3.6	<i>SOILS</i>	346
3.6.1	Analysis Area And Information Sources.....	346
3.6.2	Affected Environment.....	347
3.6.3	Environmental Consequences.....	358
3.7	<i>FISHERIES</i>	371
3.7.1	Introduction.....	371
3.7.2	Affected Environment.....	372
3.7.3	Environmental Consequences.....	390
3.7.4	Forest Plan Standards.....	395
3.7.5	Cumulative Effects.....	399
3.7.6	Regulatory Framework and Consistency.....	401
3.7.7	Sensitive Species Determinations.....	402
3.8	<i>THREATENED, ENDANGERED AND SENSITIVE PLANTS</i>	403
3.8.1	Introduction.....	403
3.8.2	Affected Environment.....	403
3.8.3	Environmental Consequences: Robert and Wedge Fires.....	411
3.8.4	Regulatory Framework and Consistency.....	417
3.9	<i>INVASIVE PLANT SPECIES</i>	418
3.9.1	Introduction.....	418
3.9.2	Affected Environment: Robert Fire and Wedge Canyon Fire.....	419
3.9.3	Environmental Consequences: Robert Fire and Wedge Canyon Fire.....	424
3.9.4	Regulatory Framework and Consistency.....	426
3.10	<i>FOREST HERITAGE RESOURCES</i>	427
3.10.1	Introduction.....	427
3.10.2	Field Surveys.....	427
3.10.3	Affected Environment – Heritage Resources.....	428
3.10.4	Environmental Consequences.....	429
3.10.5	Regulatory Framework and Regulatory Consistency.....	429
3.11	<i>ECONOMICS</i>	430
3.11.1	Introduction.....	430
3.11.2	Forest Plan Direction.....	430
3.11.3	Affected Environment.....	431
3.11.4	Environmental Consequences.....	437
3.11.5	Regulatory Framework and Consistency.....	442
3.12	<i>RECREATION</i>	443
3.12.1	Introduction.....	443
3.12.2	Affected Environment.....	443
3.12.3	Environmental Consequences.....	449
3.13	<i>SCENERY</i>	451
3.13.1	Introduction.....	451
3.13.2	Management Direction.....	451
3.13.3	Affected Environment.....	455
3.13.4	Environmental Consequences.....	463
3.13.5	Regulatory Framework and Consistency.....	465
3.13.6	Irreversible and Irretrievable Commitments of Resources.....	465
3.13.7	Design Criteria for Scenic Resources applicable to Alternative 2.....	465
3.14	<i>AIR QUALITY</i>	467
3.14.1	Introduction.....	467
3.14.2	Analysis Area and Information Sources.....	468
3.14.3	Affected Environment.....	468
3.14.4	Environmental Consequences.....	470
3.15	<i>SPECIAL DESIGNATIONS</i>	473
3.15.1	Inventoried Roadless Areas.....	473
3.15.2	Affected Environment.....	473
3.15.3	Environmental Consequences.....	473
3.16	<i>UNROADED AREAS</i>	473

Robert-Wedge Canyon Post-Fire Project Draft EIS

3.16.1	Introduction	473
3.16.2	Affected Environment	474
3.16.3	Environmental Consequences.....	474
3.17	<i>WILD AND SCENIC RIVERS</i>	476
3.17.1	Introduction	476
3.17.2	Affected Environment	478
3.17.3	Environmental Consequences.....	479
3.17.4	Regulatory Framework and consistency.....	479
3.18	<i>ROBERT-WEDGE POST-FIRE PROJECT PAST/ONGOING/FORESEEABLE ACTIONS</i>	479
	GLOSSARY	485
	REFERENCES AND CITATIONS	507
	LIST OF PREPARERS AND CONTRIBUTORS, AND PUBLIC SCOPING PARTICIPANTS	529
	PUBLIC SCOPING PARTICIPANTS.....	534
	APPENDIX A: FLATHEAD AND KOOTENAI NATIONAL FOREST REHABILITATION ACT.....	540
	APPENDIX B: ROBERT -WEDGE PROJECT POST-FIRE MORTALITY ANALYSIS AND GUIDELINES	543
	APPENDIX C: ROBERT – WEDGE CANYON POST-FIRE EIS INTERDISCIPLINARY TEAM’S RESPONSE TO THE 1995 BESCHTA REPORT.....	552
	APPENDIX D: BEST MANAGEMENT PRACTICES (BMPS)	563
	APPENDIX E: MONITORING PLAN FOR FISH, SOIL, AND WATER.....	575
	APPENDIX F: DEADWOOD HABITAT PRESCRIPTION MATRIX.....	583
	APPENDIX G: GRIZZLY BEAR ANALYSIS	591
	APPENDIX H: LYNX HABITAT ANALYSIS	595

