Bitterroot National Forest Plan Amendments

Year	Amendment Number	Nature of Decision
1989	1	Changed a Management Area boundary.
1990	2	Changed a standard to allow new temporary outfitter camps in MA 11a along the Magruder Road.
1990	3	Allowed a temporary entry into MA 5 to salvage trees killed by Gird Point Fire.
1991	4	Changed a management objective for timber. Dealt with splitting ASQ within and outside inventoried roadless areas.
1991	5	Changed the schedule for reducing obtrusive outfitter caches and removing plumbing fixtures from Frank Church-River of No Return Wilderness.
1991	6	Identified Running Creek as eligible for the Wild & Scenic River system.
1992	7	Incorporated revised management direction for the Selway-Bitterroot Wilderness.
1992	8	Amended the Forest Plan standard for issuing new outfitter and guide permits.
1992	9	Allowed a boat launch facility to be built in a riparian zone.
1992	10	Allowed a fishing pier and trail to be built in a riparian zone.
1994	11	Allowed timber harvest on unsuitable lands in the Buck-Little Boulder Timber Sale.
1994	12	Refined the vegetation management direction for the Selway-Bitterroot Wilderness.
1995	12.5	Inland Native Fish Strategy (INFISH); provides interim direction to protect habitat and populations of resident native fish.
1995	13	Allowed timber harvest on 174 acres of unsuitable lands in the Beaver Woods Vegetation Management Project area.
1996	14	Allowed timber harvest on unsuitable lands in the Warm Springs Project area.
1997	15	Allowed disposal of winter range via land exchange for specific sites in MA 8a.
1997	16	Allowed two third-order drainages on the Sula District to be managed at Elk Habitat Effectiveness values less than the 50% standard.
1997	17	Changed management area boundaries in MA 3a, 5 and 10 to allow for expansion of Lost Trail Ski Area. Changed the visual quality objective for the ski area from retention to modification.
2000	18	Updated wilderness direction for the Anaconda Pintler Wilderness
1998	19	Established the Salmon Mountain Research Natural Area
2001	20	Restricts, yearlong, wheeled cross-country travel where it was not already restricted (with several exceptions) and directs the Forest to complete site-specific planning on priority areas.
2001	21	Established the East Fork Bitterroot River Research Natural Area
2001	22	Site-specific amendment for the Burned Area Recovery Project. Refined snag, coarse woody debris and elk habitat effectiveness and thermal cover standards.
2002	23	Site-specific amendment for the Slate Hughes Watershed Restoration and Travel Management project. Allowed five third-order drainages on the West Fork District to be managed at Elk Habitat Effectiveness values less than the 50% standard.
2004	24	Replaces the 1985 Frank Church-River of No Return Wilderness Management Plan with a 2003 version. The 2003 version combines management direction in three different documents into one management plan.
2006	25	Site-specific amendment for the Middle East Fork Hazardous Fuel Reduction project. Refined snag, coarse woody debris, thermal cover and unsuitable land standards.
2007	26	Incorporate management direction in the Land Management Plan that conserves and promotes recovery of Canada lynx.

Year	Amendment Number	Nature of Decision
2008	27	Site-specific amendment for the Trapper Bunkhouse Land Stewardship Project. Refined snag, coarse woody debris, and thermal cover.
2008	28	Site-specific amendment for the Haacke-Claremont Project. Allowed portions of third-order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% standard and refined coarse woody material standard.
2010	29	Site-specific amendment for the Lower West Fork Project. Allowed portions of third- order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% standard. Refined coarse woody debris and thermal cover standards.
2012	30	Site-specific amendment for the Larry Bass Project. Refined thermal cover and coarse woody debris Standards.
2013	31	Site-specific amendment for the Three Saddle Project. Allowed portions of third-order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% standard. Refined coarse woody debris standard.
2015	32	Site-specific amendment for the Darby Lumber Lands Watershed Improvement and Travel Management Project. Allowed portions of third-order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% and 60% standards.
2015	33	Site-specific amendment for the Como Forest Health Project. Refined coarse woody debris and thermal cover standards. Allowed one cutting unit within MA 3c to be managed at modification instead of partial retention VQO.
2016	34	Site specific amendment for the Bitterroot National Forest Travel Management Planning Project. Allowed portions of third-order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% and 60% standards.
2016	35	Site specific amendment for the Westside Collaborative Vegetation Management Project. Allowed portions of third-order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% and 60% standards. Refined coarse woody debris standard. Allowed six cutting units within Mas 3a and 3c to be managed at modification instead of partial retention VQO.
2017	36	Site specific amendment for the Meadow Vapor Project. Allowed portions of third- order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% and 60% standards. Also allowed variance from thermal cover and coarse woody debris standards.
2019	37	Site specific amendment for the Darby Lumber Lands Phase II Project. Allowed portions of third-order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% and 60% standards. Also allowed variance from thermal and hiding cover standard.
2019	38	Site specific amendment for the Gold Butterfly Project. Allowed portions of third- order drainages within the project area to be managed at Elk Habitat Effectiveness values less than the 50% and 60% standards. Also allowed variance from thermal cover standard.
2022	39	Site specific amendments for the Mud Creek Project to align elk habitat, old growth, and coarse woody debris objectives on the forest with the best available scientific information.

Year	Amendment Number	Nature of Decision
2023	40	Programmatic Amendment for Elk Habitat, Old Growth, Snags and Coarse Woody Debris Objectives - Bitterroot Forest Plan

Forest Service Bitterroot National Forest 316 North Third St. Hamilton, MT 59840 406 363-3131

Reply to: 1920

Date: October 6, 1989

Dear Forest Planning Participant:

During the analysis for the Maynard Creek proposed timber sale environmental assessment, we found the vegetative habitat typing was incorrectly identified in a portion of Management Area (MA) 8a in the headwaters of Maynard Creek. Management Area 8a (Forest Plan, pg. III-58) is an aggregation of unsuitable timberlands as shown in the Forest Plan Final Environmental Impact Statement (FEIS, Volume II, pg. B-12). This area was habitat typed as subalpine fir/woodrush during the Forest Planning process which is unsuitable for timber; however, on-the-ground examination found the area to be subalpine fir/menziesia which is suitable (FEIS, Volume II, pg. B-11).

In order to be consistent with the Forest Plan direction identified above, I am making a "not significant" amendment to the Forest Plan to correct the Management Area 8a boundary. The subalpine fir/menziesia area vacated by MA 8a is consistent with the goals and will become MA 1, except for the riparian area which will be MA 3b. Management Area boundary adjustments are provided for in the Forest Plan, 1987, Chapter III, page 1, paragraph 2, shown below:

"Except for Congressionally established or special administrative boundaries, the management area boundaries are not firm lines and do not always follow easily found topographic features, such as major ridges. The boundaries represent a transition from one set of opportunities and constraints to another with management direction established for each. The boundaries are flexible to assure that the values identified are protected and to incorporate additional information gained from further on-the-ground reconnaissance and project level planning."

The analysis for this change is shown in the Maynard Creek Timber Sale Environmental Assessment, pages 3 and 35, and the decision, rationale, and appeal rights are shown in the Maynard Creek Decision Notice and Finding of No Significant Impact, pages 5, 8, and 12.

The enclosed map shows the management area boundary changes which is Forest Plan Amendment 1. If you have any questions on this change, please contact Robert L. Bigler.





Forest Planning Participant

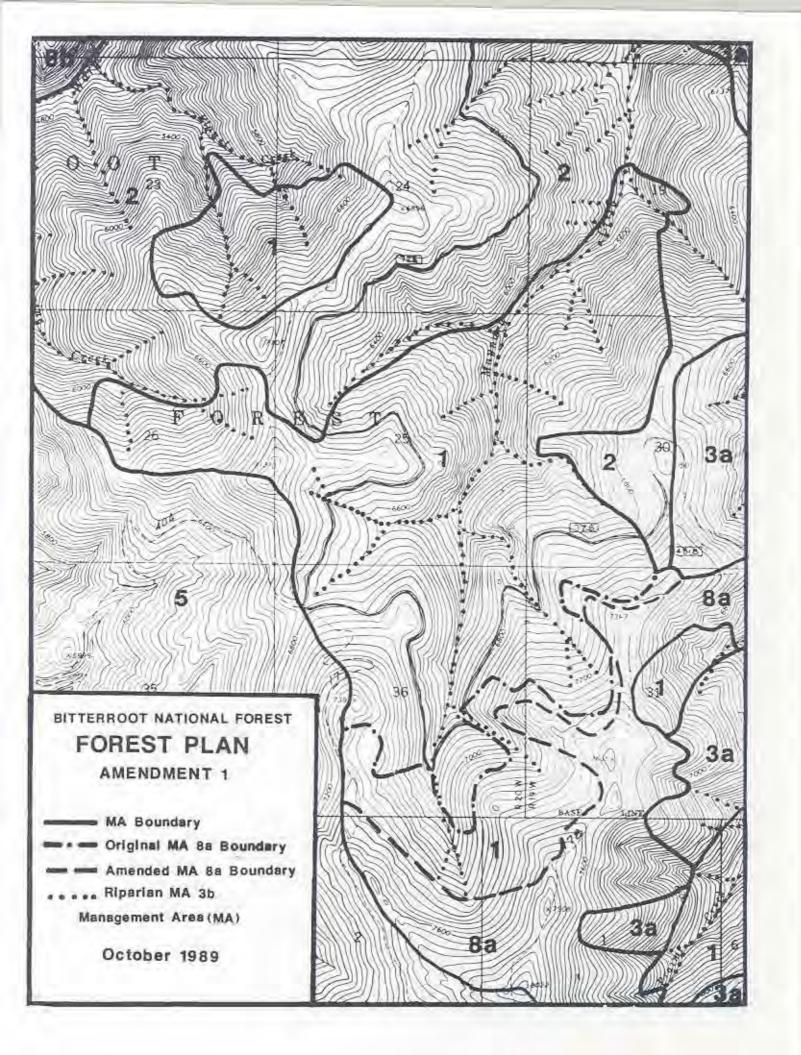
At this time, we are updating our Forest Plan mailing list. If you are interested in remaining on the Forest Plan mailing list, please complete and return the enclosed form.

Sincerely,

Bertha C. Gillam Forest Supervisor

Enclosures (2)





Forest Service Bitterroot National Forest

316 North Third St. Hamilton, MT 59840 406 363-3131

Reply to: 1920

Date: April 16, 1990

Dear Forest Planning Participant:

1 C'x Elson

Enclosed is a Decision Memo and Forest Plan Amendment documenting a Forest Plan Standard change which allow for new temporary outfitter camps in Management Area 11a along the Magruder Road on the Bitterroot National Forest.

If you have any questions, please contact Herb Spradlin, West Fork Ranger District, or Bob Bigler, Bitterroot Supervisor's Office.

Sincerely,

BERTHA C. GILLAM Forest Supervisor

Enclosures

B Bigler : BBIBDM

HC 4/17/90 06

CC: Districts

Stopp 4/17/90 06

DECISION MEMO

Bitterroot Forest Plan Amendment

I. Location

The proposed action is located in Forest Plan Management Area 11a which is the Nez Perce Road corridor on the Idaho portion of the West Fork Ranger District, Bitterroot National Forest (see enclosed map).

II. Proposed Action

The proposed action is to amend the Bitterroot Forest Plan Lands Standard (1) (Plan, p. III-75) to change wording from "No additional outfitter camps will be permitted" to "No additional outfitter base camps will be permitted." This will allow for complete implementation of Forest-wide Special Uses Standard (2) (Plan, pp. II-29) which states "Permits for new uses or uses not currently under permit will be considered."

III. Scoping and Public Involvement

The following individuals were contacted personally. A synopsis of their comments follows their name and affiliation.

Doug Tims, Idaho Outfitter and Guides Association: This amendment should not have any impact other than favorable on the Idaho industry. I agree that it is necessary.

Doris Milner, private wilderness user: The amendment appears to be appropriate. I don't see any problem.

Steve Nedeau, Idaho Conservation Officer: Sounds as if this is appropriate. Should give some thought to proper wording so that illegal outfitters are not given a chance to find a "loophole."

Wayne Kilpatrick, Manager Triple Creek Ranch/Selway User: No problem with amendment.

IV. Reasons for Categorically Excluding This Proposed Action

This action, a "not significant" Forest Plan amendment, has been determined to not have a significant effect on the human environment. As explained in Section V below, the amendment provides for overnight outfitter camps in Forest Plan Management Area 11a in order to implement a Forest Plan standard which allows for the consideration of new types of uses on the Forest. The new uses, such as one proposed for outfitted mountain bike trips along the Nez Perce Road, may require the use of campsites which are currently not allowed. The amendment will allow for issuance of authorizations of land uses. This analysis, scoping, and decision are for the Forest Plan amendment, each land use request will require an additional site-specific environmental analysis and scoping.

V. Findings of Consistency With the Forest Plan

The Forest Plan provides for new special uses or uses other than traditional outfitter hunting camps through implementation of a Forest Plan Special Uses Standard (Plan, p. II-29) which states, "Permits for new uses or uses not currently under permit will be considered." However, Forest Plan Lands Standard "No additional outfitter camps will be permitted" (Plan, p. II-75) inadvertently restricted new uses in Forest Plan Management Area 11a along the Nez Perce Road, since some uses will require overnight use of campsites at locations not currently identified as outfitter camps. The intent of the Lands Standard was to limit outfitter base camps to those currently in existence and not to prevent consideration of new uses which do not involve base camps. The Lands Standard at (1) (Plan, p. III-75) should be amended to read, "No additional outfitter base camps will be permitted," so this standard will be consistent with Special Uses Standard and to reflect its original intent.

Since this amendment provides for implementation of the intent of the Forest Plan, this is a "not significant" amendment to the Forest Plan.

VI. Implementation

This Forest Plan amendment will be implemented following the 45-day appeal period.

VII. Appeal Rights

This decision is subject to administrative review and appeal pursuant to 36 CFR Part 217. A notice of appeal must be filed with the Regional Forester, USDA Forest Service, Northern Region, Federal Building, 200 East Broadway, P.O. Box 7669, Missoula, MT 59807, within 45 days of the date of notice publication. A copy must be sent simultaneously to Forest Supervisor, 316 North 3rd Street, Hamilton, Mt. 59840. Any written notice of appeal of this decision must be fully consistent with 36 CFR 217.9 "Content and Notice of Appeal," which includes the following information: (1) State that the document is a Notice of Appeal filed pursuant to 36 CFR Part 217; (2) Identify the decision about which the requestor objects; (3) Identify the document in which the decision is contained by title and subject, date of the decision, and name and title of the Deciding Officer; (4) Identify specifically that portion of the decision or decision document to which the requestor objects; (5) State the reasons for objecting, including issues of fact, law, regulation, or policy, and if applicable, specifically how the decision violates law, regulation, or policy, and (6) Identify the specific change(s) in the decision that the appellant seeks.

VIII. Contact Person

Robert L. Bigler, Bitterroot National Forest, 316 North 3rd Street, Hamilton, MT, 59840, telephone number 406-363-3131.

BERTHA C. GILLAM, Forest Supervisor

Date

BITTERROOT NATIONAL FOREST Land and Resource Management Plan

Amendment Number 2 April 11, 1990

Amend Forest Plan Standard 3.g.(1) (Forest Plan, September, 1987, page III-75) as follows:

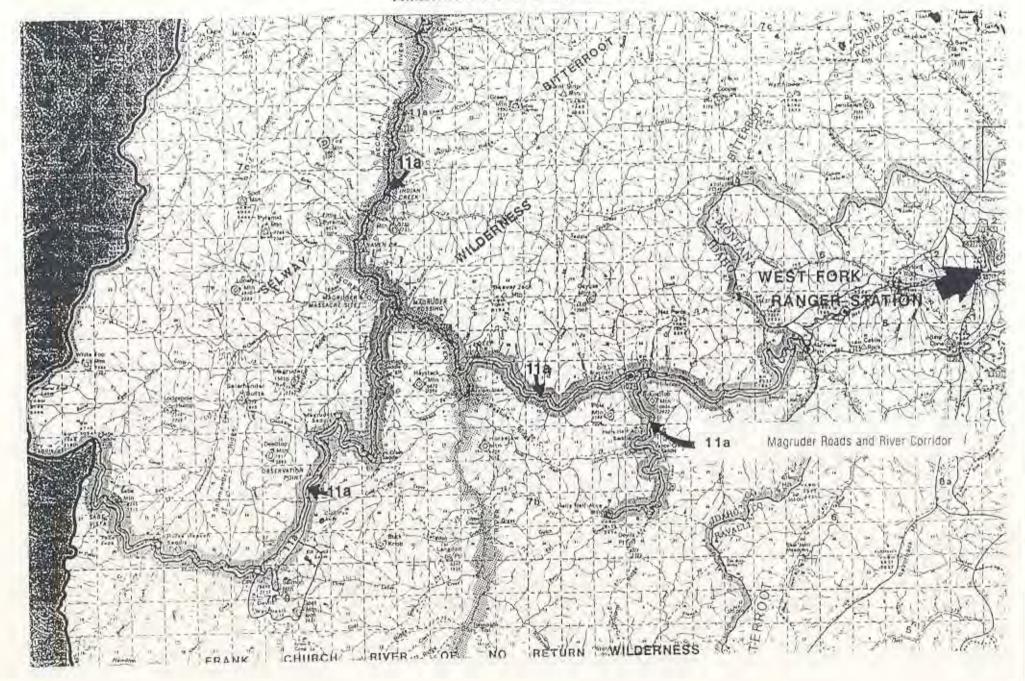
REPLACE:

- 3. Standards
 - g. Lands
 - (1) No additional outfitter camps will be permitted.

WITH:

- 3. Standards
 - g. Lands
 - (1) No additional outfitter base camps will be permitted.

AMENDMENT 2 Location Map



Reply to: 1920

Date: December 18, 1990

Dear Forest Planning Participant:

Enclosed is a Decision Notice and Finding of No Significant Impact documenting the Gird Point Fire, Management Area 5, timber salvage and site-specific Forest Plan amendment. The site-specific amendment (Amendment No. 3) will allow entry into Management Area 5 until December 31, 1995, to salvage trees killed by the 1990 Gird Point Fire.

If you have any questions, please contact Forest Hayes, Darby Ranger District, (406-821-3913) or Bob Bigler, Bitterroot Supervisor's Office (406-363-3131).

Sincerely,

BERTHA C. GILLAM Forest Supervisor

Enclosures



BITTERROOT NATIONAL FOREST Land and Resource Management Plan

Amendment Number 3 December 18, 1990

Amend Bitterroot Forest Plan (September, 1987) to add Standard G.3.e.(8) (Plan, p. III-39) as follows:

ADD:

- G. Management Area 5
 - 3. Standards
 - e. Timber
 - (8) The salvage of timber killed by the 1990 Gird Point Fire may be allowed when it does not have a detrimental effect on the goals and recreation standards of this management area. This applies only to the Bitterroot National Forest Lands within Inventoried Roadless Area 01808, but outside the area proposed as Stony Mountain Wilderness in 1990 Congressional Bill S. 2403. The salvage will be terminated by December 31, 1995. The partial retention visual quality objective, as seen from adjacent roadless lands, will be applied to this salvage rather than the retention objective indicated in standard G.3.b.(1).

END OF AMENDMENT

DECISION NOTICE

AND

FINDING OF NO SIGNIFICANT IMPACT

Gird Point Management Area 5 Timber Salvage And Site Specific Forest Plan Amendment

USDA Forest Service
Bitterroot National Forest
Darby Ranger District
Ravalli County, Montana

December, 1990

I. INTRODUCTION

A. Proposed Action

The Gird Point Management Area 5 Timber Salvage project on the Darby Ranger District of the Bitterroot National Forest, proposes to offer for sale dead timber in the Stony Mountain Forest Plan Management Area 5 which resulted from the Gird Point Fire. The fire burned a total of 1685 acres in July of 1990 of which 325 acres are in Management Area 5 (MA5).

An environmental assessment (EA) was prepared on the proposed salvage of dead timber from the Gird Point Fire. It includes detailed information on the resources, issue-responsive alternatives, and the environmental consequences associated with this project. Copies of the Gird Point Fire Salvage Environmental Assessment (October, 1990), and corresponding specialist reports are available for review at the Forest Supervisor's Office, Hamilton, Montana, or the Darby Ranger Station, Darby, Montana.

The decisions made in this Decision Notice are:

- 1) Whether to salvage the fire killed trees in Management Area 5
- 2) Which areas, if any, would be salvaged
- 3) What logging methods would be required, and
- 4) How other resources would be protected and/or enhanced during and after the logging.
- A site specific Forest Plan amendment that adds a standard for this portion of Forest Plan Management Area 5.

B. Purpose of Project

The purpose of this project is to use trees killed by the 1990 Gird Point Fire.

C. Extent of Proposed Project

The proposed project has the potential to salvage up to 2.0 million board feet (MMBF) of timber. This project is located on the edge of the Stony Mountain Inventoried Roadless Area. Harvesting in MA5 will require a site specific Forest Plan Amendment if the salvaging of the dead trees does not meet the MA5 Goals and Standards.

Harvesting is limited to the removal of dead trees. Snags left standing will meet or exceed wildlife, diversity and nutrient recycling requirements. Yarding will be by helicopter to roads outside the Management Area.

House logs could be salvaged for several years without problems with serious log deterioration.

D. Scope of Proposed Project

The analysis for the proposed action was conducted within a 3,500-acre assessment area, most of which is within the Skalkaho Game Preserve. It included third order drainages in Daly and Gird Creeks. Additional areas in Daly, Gird, and St.Clair Creeks, were analyzed to evaluate effects on watershed, fisheries, and wildlife resources.

The project is located on the Darby Ranger District, Bitterroot National Forest, Ravalli County, Montana. The proposed action is within the Inventoried Roadless Area and Management Area 5, but outside recent Congressional Wilderness Proposals, including S.2403 and S. 2235 in 1990. None of the alternatives propose to construct roads in the roadless area. The proposed action includes harvesting approximately 155 acres of Management Area 5. See(Forest Plan Chapter III, pages 36-40) for a description, goals and standards for this management area.

E. Forest Service Action to be Taken

The Forest Service Interdisciplinary Team (IDT) analyzed the environmental effects of the proposed action and six other alternatives. Chapter IV. in the Gird Point Fire Salvage Environmental Assessment, discloses the environmental consequences of implementing management activities associated with each alternative. A finding will be made determining whether this proposed action is consistent with the Bitterroot Forest Plan. In addition, the responsible Forest Service official must determine from this analysis and its corresponding documentation if there are any significant environmental effects requiring an Environmental Impact Statement (EIS). If there are no significant effects, and an EIS is not required, the responsible official must select one of the alternatives for implementation or modify one of the alternatives and select it for implementation, or request further study and development of additional alternatives.

F. Environmental Analysis

Analysis

The Environmental Assessment (October, 1990) is tiered to the Bilterroot Forest Plan Environmental Impact Statement, and its corresponding Record of Decision (September, 1987). All proposed activities are designed to meet the Forest Plan goals, objectives, and standards unless otherwise stated.

2. Preparers

The following Bitterroot National Forest employees participated in the interdisciplinary team (IDT) meetings, or otherwise provided information essential to this analysis.

Forest Hayes
Bruce Johnson
Kirk Thompson
Dick Babcock
John DeBarber
Jenny Taylor
Bob Elmore
Elizabeth Neill
Norm Davis
Marilyn Mais
Rick Swanson
Rick Schneider
Fred Stewart
Jan Krueger

District Ranger
Interdisciplinary Team Leader
Civil Engineer
Silviculturist
Forestry Technician
Wildlife Biologist
Landscape Architect
Landscape Architect
Soil Scientist
Hydrology Technician
Fisheries Biologist
Biological Technician
Economist
Range Conservationist

II. ISSUES AND PUBLIC INVOLVEMENT

A. Public Involvement

In August, 1990, the news media and several interested groups and individuals were notified by letter, explaining that the Forest Service was analyzing the salvage of timber from the Gird Point Fire, and their comments were requested. Interested individuals were also invited to participate in a field trip to view the fire and discuss management options in September, 1990.

Meetings with individual groups were also held, if a group or the Forest Service requested such. These along with all public input is documented in the analysis file.

The special interest groups and agencies involved in the Gird Point Salvage process included: Friends of the Bitterroot, Grassroots for Multiple Use, Ravalli County Fish and Wildlife Association, Women in Timber, Stoltze-Conner Lumber Company, Rocky Mountain Log Homes, Darby Ditches Irrigation District, Ravalli County Commissioners, Montana Dept. of State Lands and Montana Dept. of Fish, Wildlife and Parks. (Environmental Assessment, Appendix A)

B. Issues

The following list of relevant site-specific issues and opportunities was developed by IDT members and public who participated in the Gird Point Fire Salvage analysis. (These are also discussed in the Environmental Assessment Chapter II.)

1. Public Safety on the Gird Point Road and the Skalkaho Highway

Salvage sales are associated with the prompt removal of a resource before its loss in value. This usually means increased log truck traffic where the highest risk to the public is in meeting log trucks on roads less than double lane. In this case, the possibility of helicoptering logs to the Skalkaho highway is of greatest concern.

2. Is the existing transportation system adequate?

This applies only to the major haul route, The Gird Point Road, #714. The road is long, narrow, winding and generally slow speed. Logging and public traffic must occur in a safe and efficient way. Road drainage must also be maintained to minimize erosion and damage, Considering use on the road, are the reconstruction costs appropriate?

3. Is it appropriate to salvage log in MA5?

The IDT feels that salvage logging in this situation would not meet the intent of the Forest Plan. The logging would not add to meeting recreation goals and standards or elk security goals. However, in this situation, the team also feels the logging would not be detrimental to these resources.

4. Will the salvage operation meet Visual Quality Objectives?

Logging or road construction in certain areas could also detract from the visual quality, and lower it below the standards set in the Forest Plan.

5. Are there sites within the analysis area that are unsuitable for timber production?

Portions of the fire are very rocky, some to the point of being unsuitable for timber management because of the limited spaces a tree could grow on.

6. How will a salvage sale effect water quality?

Because most of the vegetation was removed from the burned area by the fire, the soil is more susceptible to erosion. Erosion causes sediment to collect in streams and further erode stream channels. It also impacts fish habitat.

7. How will the salvage help with timber shortage in the area?

The market is good for house logs and sawlogs. House log buyers are purchasing logs from sources as far as 500 miles.

8. Will more firewood be available?

A large percentage of the Bitterroot Valley residents heat their homes entirely or partially by wood. Firewood has been getting harder to find which usually means driving farther to find it. The Gird Point Fire is approximately 20 miles from Hamilton, thus reasonably accessible. Firewood from the belicopter operations will be available at the landings.

9. Will a salvage sale further the spread of noxious weeds?

Spotted knapweed, houndstongue, musk thistle and Canada thistle occur along the roads in the Gird Point Fire area. No road construction is planned for MA5. Much of the fire area is unroaded and steep, thus has few noxious weeds.

10. How will a salvage sale effect sensitive plants?

Because of the fire, sensitive plants are difficult to assess, however; there is an indication by comparing "like habitats", that some sensitive plants may be in the area. Helicopter yarding, since it does little if any soil disturbance, should not have an effect on sensitive plants.

III. ALTERNATIVES

A. Range of Alternatives

Two sets of alternatives were developed in the Environmental Assessment: The first set deals with road improvements on the Gird Point Road; The second deals with the salvage trees.

- Road Improvements This decision was made in the Gird Point Fire Salvage Decision Notice and will not be considered in this Decision Notice.
 - 2. Salvage Sale in Management Area 5
 - a. Alternative 1

This is a no action alternative. All fire killed trees will remain except for

those taken for firewood. The dozer fireline constructed during fire Fighting efforts will remain and no cattle barrier will be installed.

b. Alternative 5/5a

In the Environmental Assessment for the Gird Point Fire Salvage, six, action alternatives were considered. Two of those alternatives, Alternative 5 and Alternative 5a considered salvage harvest in MA5. The MA5 part of those two alternatives was identical. This decision notice deals only with the proposal to harvest in MA5 as presented in those alternatives. The Alternative 5/5a description in the EA states: "Helicopter logging would be planned in MA-5"

B. Comparison of Alternatives

Issue 1 - Public Safety on the Gird Point Road and the Skalkaho Highway.

It is difficult to determine exactly where the helicopters will use landings. We can make sure landings fit the requirements, but each helicopter operator has preferences and knows what works best for their equipment. However it is possible that landings may be established along the Skalkaho Highway. Landing on the Skalkaho Highway would require coordination with the State Highway Department.

There is a direct tie to safety and the number of log trucks using the Gird Point Road. The more trucks the greater risk of accidents with the public unless mitigating measures are taken. Each log truck hauls an average of 5 MBF per trip, therefor 200 trucks will haul 1 MMBF (1 Million Board Feet). The following chart shows the number of log trucks per alternative.

Alternative	Helicopter Landings on Skalkaho Highway?	Total Number of Log Trucks
No Action	No	0
Alternative 5/5a	Probable	400

The large number of log trucks will decrease road safety. Traffic separation or road reconstruction would help mitigate this problem.

Issue 2 - Is the existing transportation system adequate?

Road improvement alternatives are discussed in the Decision Notice for the Gird Point Fire Salvage proposal and Alternative 2 was selected. Alternative 2 provides for improvement of drainage by constructing outflow dips and other types of cross drainage. Drainage on the Gird Point Road is not adequate, however; all the action alternatives will correct the situation. This issue will not be further considered in this decision.

Issue 3 - Is it appropriate to salvage log in MA5?

Harvest in MA5	Public Response
No	Negative response from timber interests
Yes	Possible negative response from Wilderness interests
	No

Some publics view logging in MA5 as contrary to the Forest Plan standards and believe that it may reduce the potential wilderness characteristics of the site. Even though this is not a portion of the proposed wilderness it is adjacent to it. Some individuals have stated a concern that harvest may be precedent setting.

Issue 4 - Will the Salvage Sale Meet Visual Quality Objectives (VQO's)?

Alternative	Logging Units	
No Action	Yes	
Alt 5/5a	No	

The Forest Plan VQO for MA5 is retention. If the viewpoint is from within the Roadless Area then, logging would not meet the standard. Logging in MA5 would require an amendment to the Forest Plan.

Issue 5 - Are there sites within the alternatives that are unsuitable for timber production?

This Issue is not germane to salvage harvest in MA5. It applies only to MA's where timber management is an objective.

Issue 6 - How Will a Salvage Sale Effect Water Quality?

	East Creek
Fish Threshold	178%
Fire Caused	75
Alternatives	
No Action	5
Alt 5/5a	

East Creek is essentially within MA5

Issue 7 - How will a salvage sale help with the timber shortage in the area?

Alternative	Sale	Volume	MMBF
No Action		0	
Alt 5/5a Potenti	al a	2.0	

The more volume removed the more responsive this sale will be to the sale purpose; utilization of burnt trees.

Issue 8 - Will more firewood be available?

Helicopters, because of the high yarding cost, will yard very little defective wood. The defective wood is what ends up at the landings and becomes easy firewood.

Alternative	Volume Harvested	%Conventional	%Helicopter
No Action	0*	0.	0
Alt 5/5a Potentia	1 2.0	0	100

^{*} Firewood will be available along the existing roads even if the no action alternative is selected.

Issue 9 - Will a salvage sale further the spread of noxious weeds?

Helicopter harvest in MA5 will have no affect on this issue.

Issue 10 - How will the salvage sale affect Sensitive Plants?

Road construction is the measuring unit for this issue. No roads will be constructed in MA5.

IV. DECISION

It is my decision to make a nonsignificant amendment to the Bitterroot Forest Plan and to salvage burned trees in that portion of the July, 1990, Gird Point Fire, which is located in Management Area 5 of the Bitterroot Forest Plan but outside the area proposed as Stony Mountain Wilderness in 1990 Congressional Bill S. 2403 (see the attached map). The decision to salvage will be consistent with the site specific Forest Plan Amendment. I am also making a decision to implement the Management Area 5 portion of Alternative 5 and 5a in the Gird Point Fire Salvage Environmental Assessment.

The Forest Plan will be amended to provide for salvage of fire killed trees In a portion of Stony Mountain Management Area 5 by adding standard G.3.e.(8) to page III-39 of the Forest Plan as follows:

(8) The salvage of timber killed by the 1990 Gird Point Fire may be allowed when it does not have a detrimental effect on the goals and recreation standards of this management area. This applies only to the Bitterroot National Forest Lands within Inventoried Roadless Area 01808, but outside the area proposed as Stony Mountain Wilderness in 1990 Congressional Bill S. 2403, The salvage will be terminated by December 31, 1995. The partial retention visual quality objective, as seen from adjacent roadless lands, will be applied to this salvage rather than the retention objective indicated in standard G.3.b.(1).

Included in this decision are the site-specific mitigation measures to protect and improve the soil, water, timber, fish, and wildlife resources and to provide for public safety during the timber harvest activities. They are:

- A. A warning sign will be placed at the start of Road #714, on the Skalkaho Highway 38, to alert road users of logging traffic. Logs will not be hauled on weekends or holidays during the general big game hunting season. The Gird Point Road will be closed to public traffic from the end of hunting season to April 15, each winter, if log hauling is expected to occur. This will reduce the risk of public/timber harvest vehicle accidents and provide for public safety.
- B. Traffic will be controlled on the Skalkaho Highway if helicopters are flying logs over the highway or to landings along the highway.
- C. When present at least 10 snags per acre, larger than 12 inches in diameter, will be left for snag dependent species. Where available, Douglas-fir will be the species left for wildlife.

D. A minimum of 15 tons/acre of large woody debris (6+ inches in diameter) will be left on site to provide shade and physical protection to new conifer seedlings. This will also provide for future soil wood humus and nutrient recycling.

V. RATIONALE FOR DECISION

A. Issues - Environmental Impacts

The issues and environmental consequences of each alternative, including the No Action Alternative, are disclosed, displayed and compared in the Gird Point Fire Salvage Environmental Assessment (10/90). In addition, they are discussed in the specialists reports in the Project File, on file at the Darby Ranger District. Direct, indirect, and cumulative environmental effects from this proposal are identified in the EA, Chapter IV. Rationale for this decision is discussed below by issue/resource.

1. Safety

The Sawlogs need removal before loss in value, which means logging will occur the winter. Mixing of logging and public traffic on the Gird Point Road will be a safety problem, especially during periods of high public use such as hunting season. Because the road is needed by both recreationists and loggers, temporary restrictions will be initiated to lessen the conflicts. The salvage contract will specify no log hauling on weekends and holidays during the general big game season. The road will be closed to the public after hunting season through April 15. This time period is when the road is likely to be icy and difficult to stop on. This will provide for the removal of salvage timber before loss in value, public safety, and still allow reasonable access for recreationists.

2. Transportation

Proper drainage will be provided on the Gird Point Road with a salvage timber sale in MA1, MA3a, and MA3b, which must precede this proposal.

3. Roadless Area

Roads will not be constructed in the Stony Mountain Roadless Area, therefore; this action will have no effect on the roadless character of the area. Effects of salvaging part of the dead trees will be of short duration and will not change the roadless area.

4. Water Quality

Timber salvage proposed in this action is located in the unnamed tributary. designated as east drainage in the hydrologic analysis. The riparian area of this drainage is for the most part unburned by the fire. Helicopter yarding will not cause soil disturbance, and will not remove live trees therefore; water quality will not be affected by this proposed salvage.

5. Timber Shortage

This alternative will salvage the volume that is currently economical to harvest. Houselogs will help the local market because of the sales proximity to log home manufacturing plants.

6. Firewood

The fire area is within 20 miles of Hamilton, thus making it accessible to most firewood cutters. The wood is drying because of the fire, so by the time it is cut for firewood it will ready for use in stoves.

7. Noxious Weeds

The selected alternative will have no affect on noxious weed infestations.

8. Sensitive Plants

Only limited ground disturbance will occur, therefore; the selected alternative will have no effect on sensitive plants.

9. Recreation

Salvage will not effect the semiprimitive recreation.

10. Fire Hazard

By removing up to 50 percent of the snags now, future downfall will be cut almost in half. This will some what reduce the fire hazard. Typically under natural conditions a second fire will again go thru the area after the snags created by the first fire have fallen and built up a fuel bed.

11. Soil Nutrients

By removing up to 50 percent of the snags now, future downfall will be cut almost in half. This will still leave enough fiber for nutrient recycling.

12. Wildlife

Removal of some snags should improve future big game travel by reducing future fuel accumulations (EA pg 40). Areas with the fewest acres harvested will have the largest accumulations of down woody material over time. This could make it difficult for big game to travel....(EA pg 41). By removing up to 50 percent of the snags now, future downfall will be reduced. This will ...make the area more accessible to big game...(EA pg 52). Because of birds territorial limits, leaving more snags than recommended will not increase the bird populations in the fire area ...(EA pg 61). There is no direct, indirect or cumulative effect on elk security caused by ...salvaging of burned timber ...(EA pg 63).

B. National Forest Management Act Findings

1. Consistency With Forest Plan

a. Requirement

All resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands are to be consistent with the Forest Plan (16 USC 160(i)).

b. Findings

Salvage Timber harvest, as proposed, is consistent with the Forest Plan as amended in this decision. This decision notice includes a nonsignificant amendment to the Forest Plan to allow for the removal of timber killed by the Gird Point Fire in Management Area 5 (Section IV).

After reviewing the Gird Point Fire Salvage Environmental Assessment and this Decision Notice, I find the management activities and practices planned and associated with this project to be consistent with the Bitterroot Forest Plan goals, objectives, and standards.

2. Suitability for Timber Production

a. Requirement

No timber harvesting, other than salvage sales or sales to protect other multi-use values, shall occur on lands not suited for timber production (16 USC 1604(k) and 36 CFR 219.27(c)(1)).

b. Findings

This proposal to harvest in MA5 is specifically to salvage fire killed trees.

3. Clearcutting and Even-Aged Management

a. Requirements

When timber is to be harvested using an even-aged management system, a determination that the system is appropriate to meet the objectives and requirements of the Forest Plan must be made (16 USC 1604 (g)(3)(F)(i) and (iii). Where clearcutting is utilized, it must be determined to be the optimum method.

b. Findings

The Gird Point Fire has created an even-aged management system. Except for the islands of green trees, the majority were killed by the fire. The salvage sale will remove only dead trees.

4. Vegetative Manipulation

a. Requirements

All proposals that involve vegetative manipulation of tree cover for any purpose must comply with the seven requirements found in 36 CFR 219.27(b).

b. Findings

 Management prescriptions shall be suited to the multi-use goals established for the area with impacts considered in the determination.

The Forest Plan and Management Area goals, objectives and standards were considered in the Environmental Assessment. A Forest Plan amendment was necessary to allow the proposed action as disclosed in Section IV of this Decision Notice. This proposal meets those goals and amended standards.

(2) Management prescriptions shall ensure that the lands can be adequately restocked as provided in 36 CFR 219.27(c)(3) "...assure that technology and knowledge exist to adequately restock the lands within 5 years after final harvest".

Silvicultural exams indicate that the removal of dead timber will not influence the areas ability to regenerate in 5 years. Lodgepole pine, one of the dominate tree species in the fire area, is expected to naturally regenerate the fire area.

(3) Management prescriptions shall not be chosen primarily because they will give the greatest dollar return or the greatest output of timber.

Helicopter yarding of dead trees will not give the greatest output of timber. Helicopter yarding distances have been extended to meet other resource values such a water quality.

(4) Management prescriptions shall consider the effects on residual trees and adjacent stands.

Removal of the fire killed trees will have no effect on residual trees or the adjacent stands.

(5) Management prescriptions shall avoid permanent impairment of site productivity and ensure conservation of soil and water resources.

The fire has been the major effect on the sites productivity. The removal of less than one-half of the dead trees provides for maintenance of site productivity and soil nutrient recycling.

(6) Management prescriptions shall provide the desired effect on water quality and quantity, wildlife, and fish habitat, regeneration of desired tree species, forage production, recreation use, and aesthetic values.

The selected alternative protects other resource values and provides for the utilization of fire killed timber.

(7) Management prescriptions shall be practical in terms of transportation and harvesting requirements, and total cost of preparation, logging, and administration,

Communications with the house log industry during scoping indicated the value of house logs is significantly greater than for studlogs. Therefore, helicopter yarding of house logs should be economically viable.

VI. FINDING OF NO SIGNIFICANT IMPACT

1. Consideration of the Beneficial and Adverse Impacts

This salvage sale will offer raw material to the local timber economy and utilize dead trees which other wise would ultimately fall over and provide fuel for a subsequent stand replacement fire.

2. Consider the Effects on Public Health and Safety

During the implementation of this project, public safety will be provided by provisions specified in the Timber Sale Contract requiring a Traffic Control Plan with associated road signing or other means of control. In addition temporary road closures and restrictions on timber hauling will be enacted as described in the decision. The Gird Point Road will be closed to general public use during the winter months log hauling is planned.

3. Consider the Unique Characteristics of the Geographic Area

There are no unique lands identified within this proposed area of effect.

4. Consider the Degree to Which the Effects are Likely to be Highly Controversial

The salvage of dead timber is not expected to be controversial. Public involvement contacts made with major conservation groups, other special interest groups, and individuals, indicated general support for salvage and utilization of the dead timber. Some individuals expressed concern that the site specific Forest Plan Amendment may cause other site specific Forest Plan Amendments to be considered. Each site specific Forest Plan Amendment is separate and unique and will require disclosure of effects in an environmental document. The site specific amendment implemented in this document is specific as to time and location.

5. Consider the Degree Effects are Uncertain or Unknown

There are no known effects on the human environment that are highly uncertain or involve unique risk that will occur as a result of implementing this proposal.

6. Consider the Degree this Action Will Set Precedent for Future Actions With Significant Effect

Harvesting of dead timber by helicopter yarding systems is not precedent setting. Helicopter yarding is commonly used when construction of roads would not meet Forest Plan standards and goals.

7. Consider If the Action is Related to Other Actions With Cumulatively Significant Impacts

The impacts of this proposal "Salvage of fire killed timber in MA5" and the companion proposal "Gird Point Fire Salvage", were analyzed in the Environmental Assessment titled "Gird Point Fire Salvage". No cumulative effects caused by harvesting of dead timber were identified.

8. Consider the Degree the Action may Effect Listed or Eligible Historic Places

The proposal will not effect any listed or eligible Historic Place.

No eligible sites have been identified in the area covered by this decision. Helicopter yarding is not a site disturbing activity, so unidentified sites that could possibly occur in the project area will not be disturbed

9. Consider the Degree the Action may Effect Threatened and Endangered Species or Their Habitat

The proposed action will not effect any Threatened and Endangered species or its habitat.

10. Consider Whether the Action Threatens a Violation of Federal, State, or Local Laws or Requirements Imposed for the Protection of the Environment

The proposed action will not violate any Federal, State or local laws.

I have determined that the implementation of the selected alternative will not have a significant effect on the quality of the human environment and, therefore, an Environmental Impact Statement is not required. I believe the implementation of the proposed activities, mitigation and site specific corrective measures will protect or enhance soil, water, wildlife, vegetation, recreation, and roadless resources. These determinations are based on my review of the Environmental Assessment(10/90) and the findings in this Decision Notice.

VII. MITIGATION

No log hauling will be allowed during weekends and holidays during the general big game season. The Gird Point Road will be closed to the general public after hunting season. Closure dates will be thru April 15 if roads are icy and log hauling is occurring.

Traffic will be controlled on the Skalkaho Highway if helicopters are flying logs over the highway or to landings along the highway.

VIII. MONITORING AND EVALUATION

(1) Monitoring of streamflow, fisheries habitat, and fish population in Daly/Skalkaho Creeks will continue.

IX. IMPLEMENTATION

Project implementation is planned during the summer of 1991

X. CONSULTATION WITH OTHERS

Consultation with others during the preparation of the Gird Point Fire Salvage Environmental Assessment is shown in Appendix A of the EA.

XI. APPEAL RIGHTS

This decision is subject to administrative review and appeal pursuant to 36 CFR Part 217. A notice of appeal must be filed with the Regional Forester, USDA Forest Service, Northern Region, Federal Building, 200 East Broadway, P.O. Box 7669, Missoula, MT 59807, Within 45 days of the date this decision is published in the Ravalli Republic Newspaper (Hamilton, MT). A copy must be sent simultaneously to the Deciding Officer, 316 North 3rd Street, Hamilton, MT 59840. If the Notice of Appeal is more than 10 pages in length, two copies must be sent to each office. Any written notice of appeal of this decision must be full consistent with 36 CFR 217.9 "Content and Notice of Appeal", which includes the following information: (1) State that the document is a Notice of Appeal filed pursuant to 36 CFR 217; (2) Identify the decision about which the requester objects; (3) Identify the document in which the decision is contained by title and subject, date of decision, and name and title of the Deciding Officer; (4) Identify specifically that portion of the decision or decision document to which the requester objects; (5) State the reasons for objecting, including issues of facts, laws, regulation, or policy, and if applicable, specifically how the decision violates law, regulation, or policy, and (6) Identify the specific change(s) in the decision that the appellant

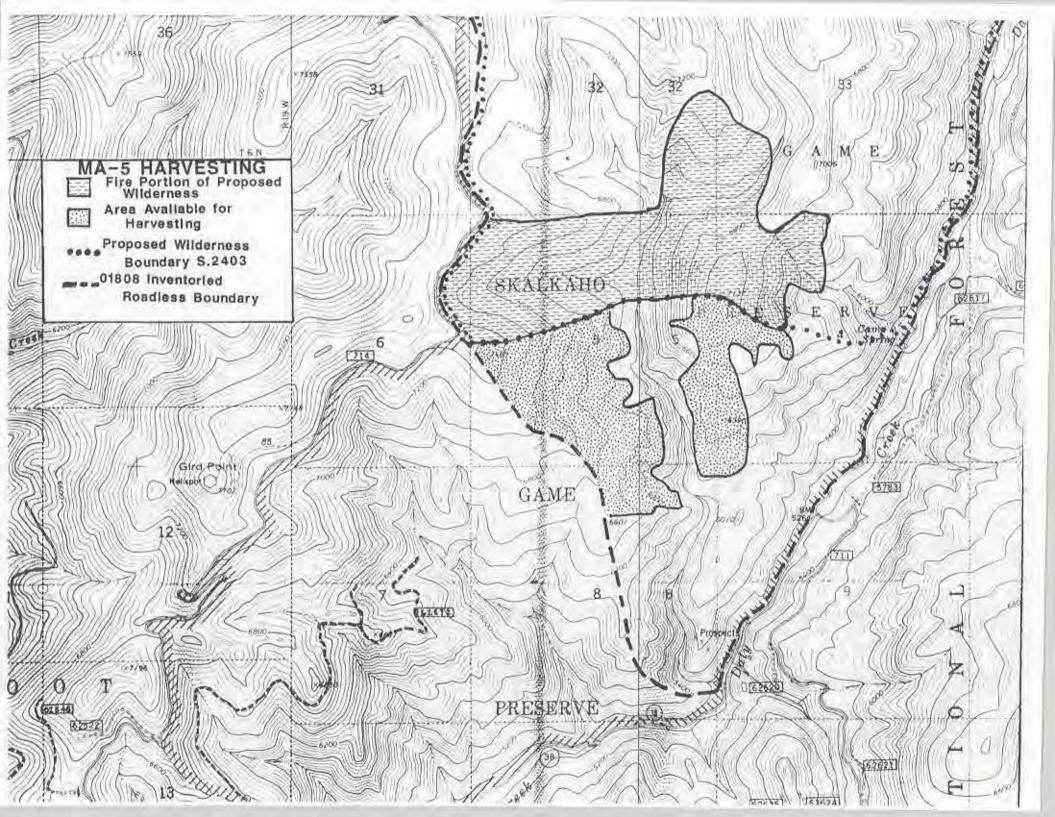
For further information, contact Forest Supervisor, Bitterroot National Forest, 316 North 3rd Street, Hamilton, MT 59840,

Charles R. Prausa

Acting Forest Supervisor

12-7-90

Date



Bitterroot National Forest 316 North Third St. Hamilton, MT 59840 406 363-3131

Reply to: 1920

Date: April 25, 1991

Dear Forest Planning Participant:

Enclosed is Amendment 4 to the Bitterroot Forest Plan. This amendment documents the separation of allowable sale quantity (ASQ) into roaded and roadless non-interchangeable components, which was disclosed in the Regional Forester's Decision Memo dated March 12, 1991. The amendment became effective on March 23, 1991.

If you have any questions, please contact Bob Bigler, Forest Planner, Bitterroot Forest Supervisor's Office (406-363-3131).

Sincerely,

BERTHA C. GILLAM Forest Supervisor

Enclosures



BITTERROOT NATIONAL FOREST Forest Plan

Amendment 4 March 23, 1991

Add the following objective for timber (Forest Plan, page II-6). Insert as the first paragraph under h. Timber.

Program up to the allowable sale quantity of 334 million board feet of timber sales from suitable lands during the first decade. This includes a non-interchangeable component of 22 million board feet of dead timber. No more than 294 million board feet of this total can be sold from suitable timberland located outside Forest Plan inventoried roadless area and no more than 40 million board feet from inventoried roadless land designated suitable for timber harvest by this Plan.

Change monitoring item 11 (Forest Plan, page IV-6). Revise "NFMA Requirement 35 CFR 219.12(K) Effects to be Measured" to read:

Volume and area offered, sold, and harvested by mgt. area, and volume and area offered and sold by roaded and unroaded component

Remaining column entries for this monitoring item will remain the same.

Forest

Bitterroot National Forest 316 North Third St. Hamilton, MT 59840 406 363-3131

Reply to: 1920/2320

Date: May 21, 1991

Dear Forest Management Participant:

Enclosed is an Administrative Action Memo which amends the Frank Church-River of No Return (FC-RONR) Wilderness Management Plan and the Forest and Land Management Plans for the Bitterroot, Boise, Challis, Payette, Nez Perce and Salmon National Forests.

You are being notified because you are on our mailing list and possibly mailing lists for other plans. In the interest of a timely notification not all of the above mailing lists have been reviewed to eliminate duplicate mailings. If you receive more than one notification please disregard any additional copies.

Make the following changes to your plans (this is Bitterroot National Forest Amendment No. 5).

Make pen and ink changes to your Forest Plan as follows:

Wherever FC-RONR Wilderness Plan is cited, the following is added;
"as amended, May 8, 1991"

For your FC-RONR Wilderness Management Plan; Replace pages 60 and 61 with the enclosed pages 60, 61 and 61a.

Should you have any questions regarding this plan amendment, please notify any of the contact persons listed in the Administrative Action Memo.

Sincerely,

BERTHA C. GILLAM Forest Supervisor

Enclosures



USDA Forest Service

Administrative Action Memo

Amendment of the Bitterroot, Boise, Challis, Nez Perce, Payette and Salmon National Forest Land and Resource Management Plans and the Frank Church--River of No Return Wilderness Management Plan

> Custer, Idaho, Lemhi and Valley Counties State of Idaho

I. Administrative Action

This administrative action is to amend the Frank Church--River of No Return (FC--RONR) Wilderness Management Plan and the Bitterroot, Boise, Challis, Nez Perce, Payette and Salmon National Forest Land and Resource Management Plans to be consistent with the FC--RONR Wilderness agreement that is attached as Appendix A. The amendment of the FC--RONR Wilderness Management Plan changes wording in the plan related to reducing the storage of items and removal of plumbing fixtures from the Wilderness. The amendment only modifies the schedule of implementation and does not change the goals, objectives, standards or guidelines of the plan.

This administrative action incorporates into the appropriate National Forest Land and Resource Management Plan and the FC--RONR Wilderness Management Plan certain administrative guidance contained in the June 4. 1990, FC--RONR Wilderness Agreement between the Chief of the Forest Service and the Idaho Outfitters and Guides Association.

II. Background

The June 4, 1990, FC--RONR Wilderness Agreement is pursuant to the lawsuit settlement for Idaho Outfitters and Guides Association (IOGA) v. U.S., No. N-87-0426. A Task Force was appointed to review the issues litigated by the IOGA concerning decisions in the FC--RONR Wilderness Management Plan to change long-term operating practices by outfitters and guides, and reported to the Chief in December, 1988. On April 20, 1989, the Chief signed an interim direction for the 1989 field season. On January 11, 1990, Regional Foresters of R-1 and R-4 delivered their evaluation and recommendation of the interim direction.

The agreement states that

"the goal is to continue to promote the use of lightweight, portable equipment that can be taken in and out of the wilderness at the beginning and end of each use season in order to achieve the purpose of the Wilderness Acts and protect wilderness resource values."

The agreement includes a schedule for removal of items that provides outfitters with the time needed to replace equipment and adjust operations to achieve the goal.

III. Reasons for Categorically Excluding This Administrative Action

The settlement agreement does not have an important effect on the entire plan or affect land and resource throughout a large portion of the FC--RONR Wilderness. This agreement changes the treatment of outfitters caches with a new schedule for the reduction in storage of items that are obtrusive and visible and the promotion of lightweight, portable equipment. It also changes the removal of underground piping with the implementation of approved methods of water collection and distribution that best protect resource values. Finally it sets a date of 1993 to review and develop a schedule of accomplishment for all unresolved issues.

We have examined the categories of exclusion in FSH 1909.15, ID No. 3, dated Jan. 20, 1990 and have determined this action falls in the category of routine administrative actions (Ch. 26.1b[1]) that may be Categorically Excluded from documentation in an Environmental Impact Statement or an Environmental Assessment. The proposal does not have any extraordinary circumstances which might cause the action to have significant effects.

IV. Findings of Consistency With the FC--RONR Wilderness and Forest Plans

The Forest Plan states that management of the FC--RONR Wilderness will be in accordance with the FC--RONR Wilderness Management Plan. The changing of the schedule for removal of equipment and underground piping from the FC--RONR Wilderness does not change the intent of the FC--RONR Wilderness Management Plan, which is to

"manage those commercial and other special uses that are authorized in wilderness in a manner which results in the least possible impact on the wilderness resource." (Plan, p. 56).

Since this amendment provides for implementation of the intent of the Forest Plan, this is not a significant amendment to the Forest Plan.

V. Implementation

The conditions of the agreement were effective at the time the FC-RONR Wilderness Agreement between the Chief of the Forest Service and the Idaho Outfitters and Guides Association was signed (June 4, 1990). This administrative action is to implement the agreement by:

Amending the Bitterroot, Boise, Challis, Nez Perce, Payette and Salmon National Forest Land and Resource Management Plans as follows:

Wherever FC--RONR Wilderness Management Plan is cited, the following is added: "as amended, May 8, 1991 " (date)

Amending the FC--RONR Wilderness Management Plan page 60-(2)(g) by changing wording from

"Existing caches will be phased out at the rate of one per year per outfitter beginning at the end of the 1986 season." "100% reduction in 1991 in storage of items that are obtrusive and visible from main and access trails and from main camp area. Progress toward accomplishing the goal of promoting the use of lightweight, portable equipment to protect wilderness resource values will be reviewed in 1993 and a schedule of accomplishment established for any unresolved issues."

And page 61-(2)(i) from

"Issue direction to Wilderness Managers that the permanent piping of water from boxed-in springs is not an allowable improvement permitted in operating plans."

to

"Removal of all in-camp plumbing fixtures connected to water systems and underground piping to tents by 1990. Implementation of approved methods of water collection and distribution for stock needs that best protect the wilderness resource values by 1992."

VI. Appeal Rights

Because these plan amendments are the result of litigation, the Chief of the Forest Service has waived any further administrative review of the amendments pursuant to 36 CFR 217.18 (as stated in August 8, 1990 memo).

VII. Contact Persons

James M. Dolan Northern Region USDA Forest Service Missoula, MT Phone (406) 329-3584

Marsha E. Kearney Intermountain Region USDA Forest Service Ogden, UT Phone (801) 625-5171

Ken Wotring FC--RONR Wilderness Coordinator USDA Forest Service Salmon, ID Phone (208) 756-2215

APPROVED:

/s/Christopher Risbrudt (for) JOHN MUMMA Regional Forester Northern Region

May 8, 1991 Date /s/ Gray F. Reynolds GRAY F. REYNOLDS Regional Forester Intermountain Region

May 8, 1991 Date

APPENDIX A

Frank Church-River of No Return Wilderness Agreement

This agreement is pursuant to the lawsuit settlement for Idaho Outfitter and Guides Association (IOGA) v. U.S. Attorney, No. N-87-0426. A Task Force was appointed to review the issues litigated by the IOGA concerning decisions in the Frank Church-River of No Return (FCRONR) Wilderness Management Plan to change long-term operating practices by outfitters and guides, and reported to the Chief in December, 1988. On April 20, 1989, the Chief signed an interim direction for the 1989 field season. On January 11, 1990, Regional Foresters of R-1 and R-4 delivered their evaluation and recommedation of the interim direction.

The goal is to continue to promote the use of portable equipment that can be taken in and out of the wilderness at the beginning and end of each use season in order to achieve the purpose of the Wilderness Acts and protect wilderness resource values. This agreement will provide the outfitters with the time needed to replace equipment and adjust operations to achieve this, according to the following schedule:

Removal of dumps and boneyards. Schedule: 75 percent by 1990, 100 percent by 1991. (All percent reductions in this agreement establish a minimum reduction, and all dates are the end of that year.)

Removal of all tent structures, with poles stored upright in an unobtrusive manner. One ground log can be left on a case-by-case basis. Schedule: 67 percent by 1990, 100 percent by 1991.

Removal of furniture made with manufactured material (such as boards and plywood). Furniture made with native materials will be disassembled and stored unobtrusively. Schedule: 33 percent by 1990, 67 percent by 1991, 100 percent by 1992.

Reduction in storage of items that are obtrusive or visible from main and access trails and from main camp area. Schedule: 50 percent by 1990, 100 percent by 1991. Continue testing and evaluating lightweight, portable equipment.

Removal of all in-camp plumbing fixtures connected to water systems and underground piping to tents by 1990. Implementation of approved methods of water collection and distribution for stock needs that best protect the wilderness resource values by 1992.

Temporary facilities of native materials are to be dismantled and stored in an unobtrusive manner during periods of non-use of the campsite. Scheduled removal of materials listed above and specifics on location and size of items to be stored in an unobtrusive manner during periods of non-use will be detailed in the annual operating plan developed with each operator and District Ranger. Toilet structures are not an accceptable method of storing unwieldy equipment and will be removed. All opportunities to achieve the mutually-agreed upon goal will be utilized. Progress toward accomplishing the goal of promoting the use of lightweight, portable equipment to protect

Regional Foresters of Regions 1 and 4, through the FCRONR Wilderness Board of Directors and Lead Working Group, will develop an implementation schedule stating which actions are to be completed, by camp and year, to achieve the removals listed above. The President of IOGA will provide input for the schedule for members of IOGA. Action items from the implementation schedule will be incorporated into each recreation service partner's annual operating plan starting in 1990.

Forest Service managers are to work closely with the outfitters as we move towards our long-term objectives governing the management and use of wilderness. Wilderness is a great resource of which we are all proud, and together we can protect wilderness for future generations while providing opportunities to visit and enjoy it.

APPROVED:

/s/George M. Leonard (for)
F. DALE ROBERTSON
Chief
United States Forest Service

June 4. 1990

/s/ Doug Tims
Doug Tims
President
Idaho Outfitters and Guides
Association

May 24, 1990

/s/ Stanley Potts
Stanley Potts
Vice President
Idaho Outfitters and Guides
Association

May 24, 1990

- (2) Base Camp: (Reserved site.) These are camps located on sites approved in advance by the District Ranger. Campsites are reserved, posted, and regularly used during the permitted season by the designated permittee. They are generally not located at road ends or airstrips. Improvements are limited to those necessary for the safe and sanitary conduct of the business and protection of the wilderness resource. The number and location of camps are to be determined by the operating plan and/or environmental assessment.
 - (a) Facilities and improvements must be temporary in nature; i.e., capable of being readily dismantled.
 - (b) Must be dismantled when not in use (within 15 days before - 10 days after allowed). Reusable poles may be cached vertically and inconspicuously against trees outside camp perimeter.
 - (c) All camp facilities and improvements should be at least 200 feet from trails, streams, and lakes, where terrain permits. Consider relocating, if possible, to where terrain permits.
 - (d) Camps will be relocated from overused degraded sites.
 - (e) Ground logs for tents may be allowed on case-by-case basis.
 - (f) Permanent hitchracks and/or corrals may be authorized, if necessary, for the humane treatment of stock or to solve a continuing resource problem. Temporary electric fence, rope hitchlines, or rope corrals are preferred. If permanent facility is needed, hitchracks are preferred over corrals.

- (g) No new caches will be permitted. 100% reduction in 1991 storage of items that are obtrusive and visible from main and access trails and from main camp area. Progress toward accomplishing the goal promoting the use of lightweight, portable equipment to protect wilderness resource values will be reviewed in 1993 and a schedule of accomplishment established for any unresolved issues.
- (h) Maximum group size is 20 people, without prior approval.
- (i) Removal of all in-camp plumbing fixtures connected to water systems and underground piping by 1990. Implementation of approved methods of water collection and distribution for stock needs that best protect the wilderness values by 1992.
- (3) Transfer Camp: (Reserved site.) These camps are generally located near roads, road and trail junctions, or airfields. They should be located inconspicuously and allow adequate space for non-outfitted facilities and use. They are used primarily for holding pack stock and equipment and serve as jumpoff points to trails, but hunting, fishing, or other activities may be permitted from these camps. Campsites may be posted for the exclusive occupancy of the permittee. The site may provide for parking space, toilet, corral, hitchrack, and tent space. within the Wilderness, the standards for base camp will also apply to transfer camps.
- (4) Spike Camp: Such campsites are unreserved. They are approved by the District Ranger for use by the permittees and those he/she serves on a temporary basis in conjunction with the permitted operations. Spike camps will meet the standards as base camps, except:

- (a) They may be available for use on a "first come, first served" basis for either outfitted or non-outfitted camping purposes.
 - (b) Unless otherwise approved by the District Ranger, camps cannot be set up more than three days in advance of use and are to be removed within three days after use. Occupancy shall not exceed 14 consecutive days, beginning with camp setup and ending with removal of camp.
 - (c) Temporary corrals or permanent hitchracks may be permitted with

Forest Service Bitterroot National Forest

316 North Third St. Hamilton, MT 59840 406 363-3131

Reply to: 1920

Date: September 5, 1991

Dear Forest Planning Participant:

The enclosed Forest Plan Amendment 6 and Decision Memo identify Running Creek as eligible for study for potential inclusion in the Wild and Scenic Rivers system. The stream segment covered by this amendment is between the existing Wild River classification near the mouth of Running Creek on the Selway River, and the Nez Perce National Forest boundary. The segment of Running Creek on the Bitterroot National Forest is within the Selway-Bitterroot Wilderness.

Identification of the Bitterroot Forest portion as eligible is consistent with the existing classification at the mouth of Running Creek and with the Nez Perce Forest segment of Running Creek which was identified as eligible for study in their Forest Plan.

If you have any questions please contact Bob Bigler, Planning Staff Officer, Bitterroot National Forest, 316 North 3rd Street, Hamilton, Montana 59840, (406) 363-3131.

Sincerely,

BERTHA C. GILLAM Forest Supervisor

Enclosure



DECISION MEMO

Forest Plan Amendment 6

Bitterroot National Forest Idaho County Idaho

Proposed Action

The proposed action and the decision are to amend the Bitterroot Forest Plan to include, as eligible for study under the Wild and Scenic River Act, the segment of Running Creek between the existing Selway Wild River designation boundary and the Nez Perce National Forest boundary. This three-mile segment of Running Creek is within the Selway-Bitterroot Wilderness Area and is upstream from the Running Creek Ranch. The portion of Running Creek on the Nez Perce Forest was identified as eligible for study in the Nez Perce Forest Plan.

The analysis and decision to include this portion of Running Creek results from a Forest Plan appeal settlement agreement with American Rivers Incorporated. The addition of this segment will provide for study of the entire Running Creek system.

This is Amendment 6 of the Bitterroot Forest Plan. The decision and amendment include the addition of Running Creek to the Forest Plan Appendix 0 Wild and Scenic Rivers table and the addition of a map showing the segment eligible for study (See enclosed Amendment 6 and Map).

Scoping and Public Involvement

Mr. E. Edward Houghton, owner of Running Creek Ranch, and Dr. Maurice Hornocker and Tony Wright of the Wildlife Research Institute at Running Creek Ranch were contacted to request their input regarding the identification of Running Creek as eligible for study. No opposition was received to the proposal; however, it was noted there may be existing irrigation facilities within the corridor that need to be retained for irrigation of the Running Creek Ranch.

Categorical Exclusion

This amendment is excluded from further documentation in an EIS or EA since the action will have no significant effect on the human environment, individually or cumulatively. Adoption of this amendment only identifies a segment of stream as eligible for study under the Wild and Scenic River Act and will not change Forest Plan allocations, goals, objectives, or standards.

Implementation Date

This decision will be implemented following the 45-day appeal period.

Administrative Review and Appeal

This decision is subject to administrative review and appeal pursuant to 36 CFR Part 217. A notice of appeal must be filed in accordance with 36 CFR Part 217.8 and 217.9 within 45 days of the date this decision is published in the Ravalli Republic newspaper (Hamilton, MT).

Contact Person

Further information about this decision can be obtained from: Robert L. Bigler, Planning Staff Officer, Bitterroot National Forest, 316 North Third Street, Hamilton, MT 59840, (406) 363-3131.

BERTHA C. GILLAM

Forest Supervisor

Bitterroot National Forest Land and Resource Management Plan

AMENDMENT No. 6

September 5, 1991

Replace Old Appendix O Table with the following, highlighted portions of table are new, replacements or additions.

Wild

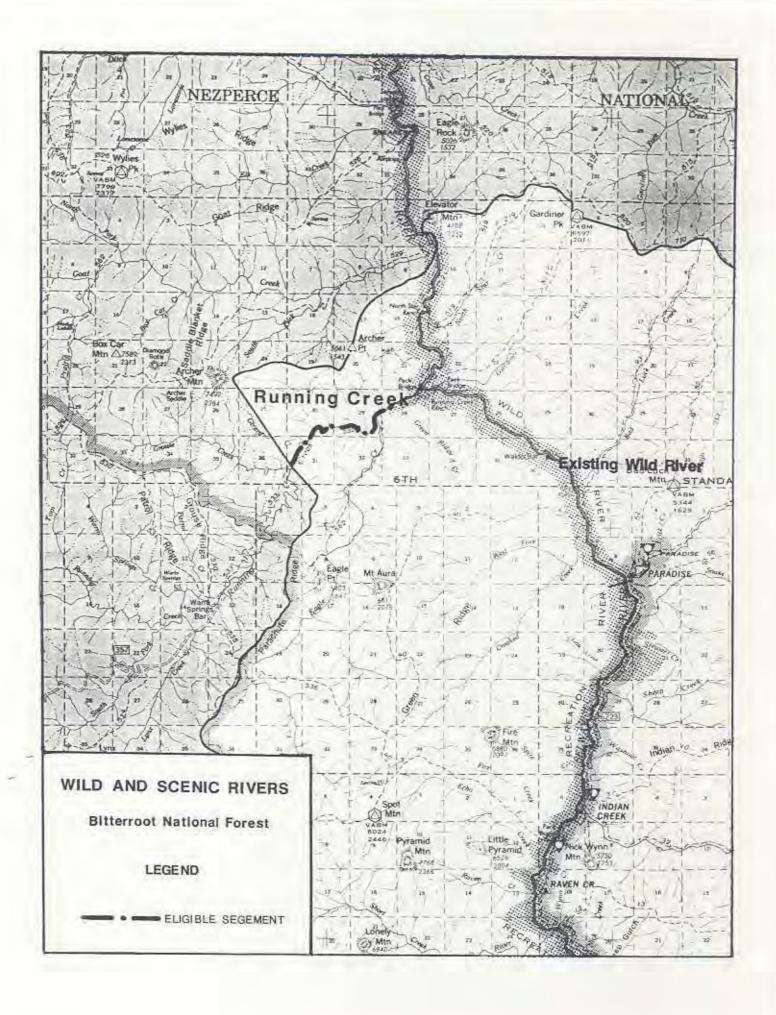
Appendix 0

Wild and Scenic Rivers
Running Existing Wild
Creek 1/ River to Nez
Perce Forest
boundary and 1/4
mi. in width from
each stream bank.

7c - 3 miles Recreation, elk habitat, warm springs and fisheries.

1/ Existing irrigation facilities and uses within the corridor will not be affected by identification as eligible for study.

Map showing eligible segment follows: Add to Appendix O of the Forest Plan



Bitterroot National Forest Land and Resource Management Plan

Amendment No. 7 February, 1992

Specific management direction for the Selway-Bitterroot Wilderness is contained in a document entitled "Selway Bitterroot Wilderness General Management Direction, (6/25/82)" which is incorporated by reference into the Bitterroot Forest Plan as Appendix K-1 (Forest Plan, Appendix K). This direction was revised in accordance with the Forest Plan standard requiring implementation of the limits of acceptable change (LAC) process (Forest Plan, page III-54). The purpose of this Forest Plan amendment is to replace the 1982 General Management Direction with the 1992 General Management Direction. The Forest Plan citations to the Selway-Bitterroot Wilderness General Management Direction will also be corrected. Specific amendments to the Bitterroot Forest Plan are as follows:

Forest Plan, Chapter III, Page III-53

3. Standards

a. Recreation

Delete standard 3.a.(2) and add the following standard:

(2) Visitor Information and Education standards and guidelines are described in the Selway-Bitterroot Wilderness General Management Direction (Appendix K).

c. Wilderness

Delete standards 3.c.(1)(a), (b), and (c) and add the following standard:

(1) Wilderness management standards and guidelines are described in the Selway-Bitterroot Wilderness General Management Direction (Appendix K).

g. Trail System

Delete standards 3.g.(1) and (3) and add the following standard:

 Trail management standards and guidelines are described in the Selway- Bitterroot Wilderness General Management Direction (Appendix K).

Forest Plan, Chapter III, Page III-57

5. Monitoring and Evaluation Requirements

Add a paragraph as follows:

Additional monitoring requirements specific to the Selway-Bitterroot Wilderness are summarized in Appendix A to the Selway-Bitterroot Wilderness General Management Direction (Appendix K).

Forest Plan, Chapter IV, Page IV-9

Add a sentence at the end of Table IV-1, Monitoring and Evaluation Requirements:

Additional monitoring requirements which are specific to the Selway-Bitterroot Wilderness, are summarized in Appendix A to the Selway-Bitterroot Wilderness General Management Direction.

Forest Plan, Appendix K, Page K-1

Change the date of the Selway-Bitterroot Wilderness General Management Direction from "(6/25/82)" to "1992 Update".

End of Amendment

DECISION MEMO

BITTERROOT FOREST PLAN AMENDMENT NO. 7
CLEARWATER FOREST PLAN AMENDMENT NO. 14
LOLO FOREST PLAN AMENDMENT NO. 16
NEZ PERCE FOREST PLAN AMENDMENT NO. 16

I. Summary

The Selway-Bitterroot Wilderness lies within the Nez Perce, Clearwater, Bitterroot, and Lolo National Forests. General Management Direction for the Selway-Bitterroot is contained in a document with that title prepared by the four Forests in 1982. This document is incorporated by reference into each Forest Plan, and wilderness management standards in the individual Plans are based on it.

Each of the four Forest Plans also contains language requiring application of the Limits of Acceptable Change (LAC) wilderness planning system. This Forest Plan amendment addresses ten general management problems associated with use of trails, campsites, and airfields, and does so through the LAC process. The amendment replaces parts of the Selway-Bitterroot Wilderness General Management Direction cited above, and the amendment to the General Management Direction is also an amendment to the four Forest Plans. The remainder of the 1982 management direction will also be updated through the LAC process, and will be the subject of future Forest Plan amendments.

The new management direction in this amendment provides guidelines for use of educational and informational programs, restrictions on travel or use, posting signs and markers, and low-impact trail construction, repair, and maintenance. When specifically proposed for implementation, most of these activities can be categorically excluded from documentation in an Environmental Assessment or an Environmental Impact Statement. Some of the activities, such as trail construction and reconstruction, may require further NEPA analysis and documentation.

A copy of the revised Selway-Bitterroot Wilderness General Management Direction is attached. A copy of the unrevised Management Direction is available upon request from any of the four Forests.

II. LAC Planning and the Selway-Bitterroot Wilderness

The Wilderness Act states that wilderness areas shall be administered "for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character..." (16 U.S.C. 1131). Expanding on this requirement, the United States Department of Agriculture wilderness regulations (Title 36, Code of Federal Regulations, Part 293) specify that

"...National Forest Wilderness resources shall be managed to promote, perpetuate, and, where necessary, restore the wilderness character of the land and its specific values of solitude, physical and mental challenge, scientific study, inspiration, and primitive recreation. To that end, (a) Natural ecological succession will be allowed to operate freely to the extent feasible; (b) Wilderness will be made available for human use to the optimum extent consistent with the maintenance of primitive conditions, (c) In resolving conflicts in resource use, wilderness values will be dominant to the extent not limited by the Wilderness Act, subsequent establishing legislation, or the regulations" (36 CFR 293.2).

LAC planning derives directly from the Wilderness Act and the regulations. As described in Stankey, et. al., "The Limits of Acceptable Change System for Wilderness Planning" (USDA Forest Service General Technical Report INT-176, 1985), the process "gives primary attention to the wilderness conditions that exist and are judged acceptable...the process requires deciding what kind of wilderness conditions are acceptable, then prescribing actions to protect or achieve these conditions." (Emphasis in original). It is important to note that this Forest Plan amendment is programmatic; it does not make decisions on site-specific application of prescriptions.

As envisioned by Stankey et. al., the LAC planning process consists of a series of interrelated steps leading to a set of measurable objectives that define desired future wilderness conditions. Public participation is extensive. Wilderness "opportunity classes" are established, and management direction is identified to maintain or achieve the desired condition. Four opportunity classes are established for the Selway-Bitterroot Wilderness by this amendment, these are described on pp. 5-10 of the revised General Management Direction. Monitoring requirements are also established to ensure that the desired conditions are being met. Additional information on the LAC process is contained in Appendix D to the General Management Direction.

A task force composed of Forest Service employees, researchers, individuals, and representatives of Selway-Bitterroot Wilderness user groups was active throughout development of the LAC management direction. The goal was to achieve a balanced representation between different user groups, perspectives, and on-theground knowledge. A transactive planning process was utilized where group members worked towards finding mutually acceptable solutions by consensus, with the aim of providing workable management direction with public support.

"Prevention of Significant Deterioration" is a key concept in the LAC process and is also the desired future condition of the Selway-Bitterroot Wilderness. Managers are responsible for preventing or correcting impacts that could have adverse cumulative effects. The intent is to prevent a net degredation of the wilderness resource. Minimum management actions for future implementation which would correct specific problems are also identified during the LAC process.

For the most part, present campsite and airfield conditions in the Selway-Bitterroot were found acceptable, and the changes in management direction listed in this amendment are largely aimed at preserving these conditions. Some campsites and trails are in need of rehabilitation, and the new management direction provides guidance for accomplishment of this work.

III. Changes to the 1982 General Management Direction

This amendment makes two kinds of changes to the 1982 document which is incorporated by reference into the Nez Perce, Clearwater, Bitterroot, and Lolo National Forest Plans. These two kinds of changes are changes that involve management direction and changes that do not involve management direction.

a. Changes That Involve Management Direction

Section A. Wilderness in the 1982 direction has been replaced with a summary of LAC opportunity classes together with new management and monitoring requirements.

Section B. Recreation in the 1982 direction has been changed to reflect LAC analysis. It also includes new management and monitoring requirements.

Section M. Transportation System - Roads and Trails in the 1982 direction has been changed to reflect LAC analysis. It also includes new management and monitoring requirements.

Section N. Transportation System-Air Travel and Section Y. Airfield Portals in the 1982 direction have been updated and redesignated as Section O. Aircraft Use and Facilities. It now reflects LAC analysis and includes new management and monitoring requirements.

Section V. Law Enforcement in the 1982 direction has been deleted because repeating requirements set out in Part 261 of the Code of Federal Regulations is redundant.

Section P. Signing in the 1982 direction has been deleted because direction on signing is now contained in Section A. Wilderness and Section B. Recreation.

Section U. Access to Private Lands, Valid Occupancies, and Valid Mining Claims in the 1982 direction has been deleted because Forest Service Manual direction adequately addresses these issues.

Section X. Pristine Areas in the 1982 direction has been deleted because the Pristine Area concept has been replaced by the Opportunity Class concept under LAC.

Section K. Land Occupancy - Private Lands in the 1982 direction has been deleted because it is no longer applicable.

Section O. Communications in the 1982 direction (redesignated Section P in this amendment) has been updated to reflect the fact that the Running Creek-North Star-Selway Lodge telephone line has been removed.

Part II. 36 CFR 219.13(f)(2) A. Fire Management in the 1982 direction has been updated to reflect the fact that two lookouts scheduled for removal have been removed, and has been redesignated as Section K.

b. Changes That Do Not Involve Management Direction

- * The introduction has been updated.
- * Sections J through R and U through W have been redesignated.
- * Part II. 36 CFR 219.13(f)(2) B. Insects and Disease in the 1982 direction has been redesignated at Section J.
- * "Situation" statements in all sections have been updated and termed "Description" to parallel Forest Plan terminology.
- * All language has been changed to gender-neutral.
- *The following appendices have been added:

Appendix A -- Monitoring and Evaluation Requirements

Appendix B -- Methods for Measuring or Evaluating Monitoring Requirements

Appendix C -- Problem Areas Not Meeting LAC Standards for Site and Social Conditions

Appendix D - Planning History, Issues, and Coordination Structure

Appendix G - Glossary

^{*}The following appendix has been updated:

Appendix F -Trail Maintenance Responsibilities

*The following appendix has been deleted:

Appendix (undesignated) - Habitat Types

IV. NFMA and NEPA Requirements

The National Forest Management Act (NFMA) regulations at 36 CFR 219.10 (f) state that:

"the Forest Supervisor may amend the Forest Plan. Based on an analysis of the objectives, guidelines, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the Plan, if the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan."

Adoption of this amendment will not significantly alter Forest Plan goals, objectives, standards, or guidelines for the Selway-Bitterroot Wilderness; indeed, the amendment should enable wilderness managers to better meet the intent of the Wilderness Act and existing Forest Plan goals, objectives, standards, and guidelines. The amendment is therefore not significant in terms of NFMA.

The NFMA regulations at 36 CFR 219.10(I) go on to say that:

"If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures."

NEPA procedures also require a determination of significance, but NEPA significance is different than NFMA significance. NEPA significance is defined in 40 CFR 1508.27 in terms of the context and intensity of environmental effects.

Environmental effects must be considered in light of the scope of the decision being made. This amendment provides programmatic guidance for management of the Selway-Bitterroot Wilderness. It does not represent a commitment to undertake any specific management activity at any particular location and does not by itself cause environmental effects. Site-specific impacts cannot and need not be considered at this time.

The overall emphasis of the LAC process as applied in the context of the Selway-Bitterroot Wilderness is on prevention of significant deterioration; that is, on prevention of degredation wilderness-wide. The direct, indirect, and cumulative effects of implementing the management methods listed in the amendment would move toward preservation of the affected environment in its existing (1991) condition. These effects would not be significant as defined in 40 CFR 1508.27.

NEPA regulations provide that Federal agencies can establish categories of actions to be excluded from documentation in an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) if these actions have been found to have no individually or cumulatively significant effects on the human environment (40 CFR 1508.4). Current Forest Service direction on categorical exclusions is found in Forest Service Handbook 1909 15-91-1.

Some of the management methods contained in the amendment to the Selway-Bitterroot Wilderness General Management Direction are of the information-and-education type; these can be excluded from documentation in an EA or EIS as specified in Section 26. (a of the Handbook, which lists categories established by the Secretary of Agriculture. The relevant section is:

- *(a) The following are categories of activities which have been determined not to have a significant effect on the human environment and are excluded from the preparation of environmental assessments (EAs) or environmental impact statements (EISs)...
- ...(4) Educational and informational programs and activities;*

Other management methods are included in Section 26.1b of the Handbook, which lists categories established by the Chief of the Forest Service:

The following categories of routine administrative and maintenance actions normally do not individually or cumulatively have a significant effect (40 CFR 1508.22) on the quality of the human environment and, therefore, may be categorically excluded from documentation in an environmental impact statement (EIS) or environmental assessment(EA):

- 1. Administrative actions, such as road and area closures; restrictions on travel or use, such as camping, boating, or hunting; and posting signs and markers.
- 2. Construction of low-impact facilities or improvements, such as ...trails.
- Repair and maintenance activities, such as on buildings, grounds, trails, rights-of-way, and range improvements."

A few of the activities discussed in the amended General Management Direction, such as extensive trail construction or reconstruction, may require further site-specific NEPA analysis and documentation. This requirement is noted as part of the revised General Management Direction. However, with these exceptions, no extraordinary circumstances exist which might cause activities permitted by the amendment to have significant direct, indirect, or cumulative effects.

Since most of the activities permitted by the amendment can be categorically excluded and the remaining activities identified in the General Management Direction would require site-specific NEPA analysis, the amendment itself is categorically excluded from documentation in an EA or EIS under Forest Service Handbook 1909.15 Chapter 26.1(1) and Forest Service Manual 1952.2, which states that "proposed actions considered for categorical exclusion which are not clearly within a typical class must have no more environmental impact than those which are".

V. The Project File

Relevant environmental and other documentation upon which this amendment is based is on file at Moose Creek Ranger District. Nez Perce National Forest, P.O. Box 464, Grangeville, ID 83530. More information about the amendment can be obtained from Lisa Therrell, (208) 983-2712.

VI. Appeal Rights

Forest Plan amendments are appealable under 36 CFR 217.3(b)(1). As discussed above, the changes in management direction listed in Section III(a) above constitute the core of the amendment and adoption of these changes is the primary decision being documented in this Decision Memo. The other changes in the General Management Direction can be reconsidered during the next phase of LAC implementation if that is necessary. Since the parts of the General Management Direction unaffected by this amendment are already included in the Forest Plan and the appeal period for the Plan expired in 1987, these parts are not appealable as components of this decision.

Notices of this decision will be published within the same week as legal advertisements in these four newspapers: Ravalli Republic, the Lewiston Morning Tribune, the Missoulian, and the Idaho County Free Press.

The 45-day appeal period will begin on the date the last of these notices is published. Appellants must file two copies of a Notice of Appeal with the Regional Forester, 200 East Broadway, P.O. Box 7669, Missoula, MT 59807. Notices of Appeal must meet the requirements of 36 CFR 217.9.

JAMES D. GLEVANIK

Acting Forest Supervisor Bitterroot National Forest

WIN GREEN

Forest Supervisor

Clearwater National Forest

2/5/92 Date

ORVILLE DANIELS

Forest Supervisor

Lolo National Forest

MICHAEL KING

Forest Supervisor

Nez Perce National Forest

1/31/92 Date

2692 Date

Appendix-Agencies and Persons Consulted

Many individuals participated in the development of this management direction. These can be grouped into four broad categories: the LAC task force and others kept informed at the same level, Forest Service employees, members of the public kept informed periodically throughout the planning process, and members of the public on the Forest Plan non-significant amendment mailing lists for the Bitterroot, Clearwater, Lolo, and Nez Perce National Forests. These groups are listed below.

SELWAY-BITTERROOT WILDERNESS PLANNING TASK FORCE: The following list shows task force
membership as of June 1990. Some of these members are relatively inactive. Membership has changed
somewhat since the inception of the planning process in 1987 due to attrition, individuals losing interest, etc...

Planning Coordinator:

Lisa Therrell (Moose Creek R.D.)

U.S.F.S. Core Team:

Dennis Dailey, team leader (Moose Creek R.D.) Bill Goosman (Moose Creek R.D.) Dennis Griffith (Lochsa R.D.) Dennis Elliott (Powell R.D.) Herb Spradlin (West Fork R.D.)

U.S.F.S. Backcountry Workers:

Bill Goslin (Stevensville R.D.) Sarah Walker (Lochsa R.D.) Warren Miller (Moose Creek R.D.)

Fish and Game:

John Firebaugh (Montana Department of Fish, Wildlife, and Parks)
Lyn Nielsen (Montana Department of Fish, Wildlife, and Parks)
Gregg Servheen (Idaho Department of Fish and Game)
Jim Olson (Montana Fish and Game Commission)

Universities and Research:

Steve McCool (University of Montana) Ed Krumpe (University of Idaho)

Commercial Outfitters and Guides:

Spencer Trogdon (Montana Outfitter Guide Association)
Bob Lamberson (Montana Outfitter Guide Association)
Don Habel (Idaho Outfitter Guide Association)
Grant Simonds (Idaho Outfitter Guide Association)
Doug Tims (Idaho Outfitter Guide Association)
Jacey Nygaard (Idaho Outfitter Guide Association)

Leo Grane (Idaho Outfitter Guide Licensing Board) Frank Hill (air service)

Non-Commercial Users - Organized Groups:

Paul Snyder (Backcountry Workers Association) Jim Curtis (Sierra Club) Doris Milner (Montana Wilderness Association) Jim Dayton (Five Valleys Audubon) Marty Almquist (American Wilderness Coalition) Steve Didier (Back Country Horsemen of North Central Idaho) Don McPherson (Back Country Horsemen of North Central Idaho) Marvin Bell (Bitterroot Valley Back Country Horsemen) Mike Chandler (Missoula Back Country Horsemen) Jim Babb (Solar Club-Pilot) Larry Hippler (Idaho Bureau of Aeronautics) Art Callan (Ravalli County Fish & Wildlife Association and Ravalli County Trout Unlimited) Arnold Bolle (The Wilderness Society - Montana) Bobbie Hoe (Wilderness Watch) Craig Gehrke (The Wilderness Society - Idaho)

Non-Commercial Users - Unaffiliated:

Mort Arkava (Hiker)
Pat Burke (Hiker)
Kathy and Bill Franks (Hiker)
Roger and Janice Inghram (Stock user)
Gordon Reese (Stock user)

Specialized:

Dick Walker Bill Worl

In addition, the following individuals received all task force mailings and many chose to participate by attending task force meetings. Individuals marked with a *** were added to the list after 3/89.

Joe Ashor (former planning coordinator)
Mike Medberry*
Randy Borniger
Stewart Brandborg
Smoke Elser
Bruce Farling
Archie George
Tom Gionet
Woody Hesselbarth
Pat Holmburg*
Richard Kuhl

Dennis MacMenamin Bob Oset Don and Elaine Pearsons

Al Latch

Joy and Gerald Richie John Rose Dave Schilz* Gus Serven Steve Spenner* Ken Stauffer

Wally Taylor*

2) FOREST SERVICE EMPLOYEES: In addition to appointed task force members, many Forest Service employees attended meetings, were consulted as specialists, or were kept informed of planning progress. This list is not exhaustive. Bob Daniels Kirby Matthews Jo Barnier

Jo Barnier
George Tompkins
Kerry McMenus
Rollin Kehlet
Wayne Wright
Pete Parsell
Chuck Raddon
Mike Myers
Mel Fowikes
Ken Anderson
John Drake
D.L. Dowell
Rick Adams
Connie Saylor
Jill Lamb

Fred Trevey

Jack Fischer

Forest Hayes

Dave Silvieus-

Tern Grotzinger

Gordon Ash

Charles Mosier

Laird Robinson

Bruce Johnson

Wendel Hann Bob McKee Marc Childress Mike Wilson John Ormiston Dan Davis Dave Fischer Pete Deane Brian Vachowski Allison Jackson

Beth Horn

David Cole

Jerry Covault

Phil Leonardi

Wendell Beardsley Jan Krueger George Weldon Robert Bigler Dale Swee Jim Heid Kevin Elliott Chuck Troxel Mark Woods Spike Thompson Margaret Ewing Orville Daniels Gina Owens Marty Almquist Mari Shirazi Tommy Gionet Tom Kovalicky Cal Joyner Elayne Murphy

Mike Oliver

Steve Morton

Jon Bledsoe

Chuck Prausa

Lloyd Reesman

Patricia Johnston

Woody Kipp Barry Miller Sally Blevins Joe Bednorz Bob Boston Robert Meuchel Jim Dolan Herb Spradlin Dave Poncin

Bertha Gillam Dennis Johnson Patty Stieger

3) INDIVIDUALS OR GROUPS KEPT INFORMED PERIODICALLY THROUGHOUT THE PLANNING PROCESS:

Ken Allaman Cliffton R. Merritt Bob and Kris Anderson

Roscoe S. Angle B-C Outfitters Micheala Stickney Senator Max Baucus Fritz and Catherine Bell

Don Biddison Rick Black Cliff Bove

Cheryl Bransford Ernest A. Busek Keith E. Carlson Chuck Centers Chateau Outfitters Coeur D'Alene Outfitters

Tom Coston Lauretta Grabtree Don Crawford Leo Cummins

Don Hatch River Expeditions, Inc.

Elwood Masoner's Whitewater Adventures

American River Touring Assoc. Anaconda Pintler Wilderness Assoc.

R.A. Anderson Marvin Armstrong Peter Bahls Dennis Baird Bear Creek Outlitters

J. Frederick Bell Birch Creek Outfitters Raymond R. Bloom

R.A. Boyer

Senator Conrad Burns

Dennis Cardy Lisa Cartwright Ruth Centers

Senator Steve Symms

Patricia Cohn

Ravalli County Planning Office

Tim Craig Bobby R. Crick Donald L. Dressen

Eakin Ridge Outfitters, Inc.

F & A Outfitters, Inc.

Scott Fasken

U.S. Fish and Wildlife Service, MT

Sydney Frissell Gordon Frost Glacier Raft Co. John Goodman Robert Griffiths James Habeck Oats Hargett Don Hatch Dave Hayes

Heinrich and Smith

John Hendee Kent Henderson Dave Hettinger Joe Hillers

Holiday River Expeditions of Idaho

Edward E. Houghton Idaho Conservation League Kelly Creek Fly Fishing Outlitters

Mark Kowack Gary Lacy

Lochsa River Outfitters

R.J. Luchau

M. & M. Outfitters

Pam Marcum

Sandy McIntyre

Linda Merigliano

William H. Mitchell

Montana Wilderness Association

Bud Moore William Morris Steve Nadeau Nature Conservancy John Osborn Ralph Oswald

Rod Parks and Bob Van Allen

Ernest Peterson Dave Price

Ravalli County Fish and Wildlife Assoc.

The Salmon Recorder-Herald

Dwain Rennaker River Odysseys West

Sierra Club, River of No Return Task Force

Tom Ruffato
James A. Russel
Salmon Air Taxi
Nick Sanyal
Dave Scherer
Art Searnans
Rik Smith
Robert M. Smith
Julie Titone

U.S. Fish and Wildlife Service, ID Fourth of July Creek Outlitters

Michael Frome FWL Outfitters Tom Glassford Art Griffith Craig Grother Sam Ham Mel Harold Rich Haydon Clem Pope Dave Hemphill Jim Henderson Jack Herbert

High Country Outfitters

Mike Hinds Alice Homsey Glen Hower Bob Karr

Rebecca Kosanke David Kozub Mario Locatelli Lochsa River Ratters

Dean A. Lydig

Representative Larry Craig Representative Ron Marlenee

William McLaughlin Garry D. Merritt

Montana Outfitters & Guides Montana Wildlife Federation

Richard Mooris Ben Myron

National Organization for River Sports

Richard Norris R.K. Osterheld Paradise Outfitters Gary Peters Everett Pierce Mary Pullen George H. Holman Bob Rehleld

Renshaw Outfitting, Inc.

Ray Rugg Bill Sager

Salmon Back Country Horsemen

John Sayles Bruce Scott Dick Shew Koren Burling Jerry Snyder

Senator James McClure

Stan Stenes Robert Stewart

The Wilderness Society

Jerry Thiessen Three Rivers Resort

Jim Traub Triple "O" Outfitter

Harry Vaughn Marlene West Michael P. Werner

Wildlife Outfitter Guest Ranch

Ron and Mimsi Wise Howie Wolke

W. Travis and Beverly York

Charlotte Zikan

Frogg Stewart Steve Stubener Gwen Thibodeau James R. Thomson Ernest Townsend Marni Angood Jack Tuhalske Ron Vigil Duane Whipple Wilderness Aviation

Pat Williams Punk Wolfinbarger Fred Wright Bob Zager

4) INDIVIDUALS OR GROUPS CONTACTED 9/90: The following individuals or groups were on forest plan mailings lists and had not been contacted previously regarding Selway-Bitterroot Wilderness management planning. They were sent the August 1990 Fact Sheet and the proposed management direction for review.

Oregon DOT/Aeronautics

Carl A. Weholt Phillip B. Donally Roderick Sprague US Department of Labor

Advisory Council on Historic Pres.

Agricultural Stabilization and Conservation Service

Montana Wood Products Association

Anaconda Leader Andrew Maier William Atkinson Carl Baldwin, Jr. R.C. Bartholomew

Tammy, Norman, and Sharon Baugh

Ron Beitelspacher Errol D. Bencke Susan Bernatas Mary C. Bjorlie

Blueribbon Coalition, Inc.

Kevin Bopp AM Ski Federation Jim Bradley

Becky and Douglas Brede

L.J. Brooks

John A. Bruna

Colorado State University libraries

Don and Donna Davis Bethel A. Clanin

Representative Richard Stallings Department of Transportation

Jerry Allan

American Wildlands Montana Operations

Steve Anderson

Associated Press, Helena

Dana Bailey John A. K. Barker Ace Barton

Frank W. and Bette J. Bedey

Terry Belton C.V. Berg

Bitterroot Conservation District

Marshall Bloom

Bonneville Power Administration

Stan Bowen Bruce Bowler Robert L. Bray Wayne Brewster Tim Bruce

Bitterroot Chamber of Commerce

Bureau of Indian Affairs: N. Idaho Agency, Portland OR, and Pablo MT

Bureau of Land Management, Billings, Missoula, Boise

Dale Eurk Ron Burrington
Butte Library Charles V Campbell
Jeff Carlson Dan Carter

Tom Cassidy Fred Cavill
Champion International Corporation; Milltown, Missoula, and Libby

Champion Timber Lands; Missoula and Hamilton

John Chapman Laura Christensen Russell L. Chrysler

Columbia River Inter-tribal Fish Commission Confederated Salish and Kootenal Tribe

Cort Conley Del Coppock Lane Coulpson Colbert E. Cushing Darby Lumber, Inc

DAW Forst Products Company; Coeur D'Alene ID and Superior MT

John Delaney

Dept. of State Lands, Hamilton

James Doolittle Mark Doty E.M. Duncan

Eastern MT College Library The Ecology Center

Elk River School / Community Library

A.E. and Celeste G. Engel

Michael Evans

Extension Service Natural Resource and Rural Development

Exxon Company, USA

Federal Highway Administration; Denver and Portland

Federation of Fly Fishers

John A.Feyk

Montana Power Company

Flathead County Weed Supervisor Florida Parks and Recreation Forest Library, St. Paul Fon Lewis College Library

Tom France Monte Garrett

Geological Survey, WRD

Richard Gilman

Jay Gore Grangeville Library Great Bear Foundation

Fred Griswold John Grove Donald M. Gustin Doug and Laurie Haas Stephen Hackney Everett Hagen

Department of Lands, ID Department of Agriculture, ID

Ins Hardin Andy Harris Paul Hart

Jim Haimes

Wayne A. Hedman N.A. Henkelman Craig L. Chase Loy E. Christensen Clearwater RC & D Office

Wally Congdon Adena Cook Joe Corlett James Crowley Darby Library Paul Decelle

Dept. of Natural Resources & Cons. MT

Alan Deyo Charles E, Doty D.L. Dowell

Eastern MT College Outdoor Program

Echo Film Productions Terry Egenhoff

Linda Ellison Kirby Erickson

Evergreen Forest Products, Inc.

Bob Faller

Mike Ferguson John W. Sisher

Five Valleys Audubon Society Flathead Culture Commission

Jo Ellen Force Neal Forrester Lane Fortin

Dean and Betty Frost US Corp of Army Engineers

Jerry L. Gifford Dale Goble

Idaho Department of Water Resources

Richard E. Gray T. J. Green

David and Fay Groff Fred L. Guenzler Steven W. Hayes Bill Hackett Dewey Haeder Bob Haggard

Hamilton City Council Wm. H. Hamilton Happy Saddle Tramps

BVTV

Barrel L. Harris Hearst Free Library William F. Heineman John S. Henson High Country News

Bob Hinman

George Holman

Ira Holt

Steve Horton

Harvey L. Hughett

Paul Hyndman

Idaho Air Quality Bureau

Tim Bernard

Idaho County Free Press

Lewis A. Munson

Idaho Environmental Council

Idaho Mining Association

Steve Gunderson

Idaho Steelhead and Salmon Unlimited

Independent Record

James S. Riley

Laura M. Jackson

C.R. Jannke

Norman J. James

Mike Jenkins

Ellen Jansen

Charlie Johnson

David W. Johnson

Leo P. Joron

Roy P. Kasper

KECI TV

Kelly Kelso

George R. King

Janet E Kludt

Stoltze-Conner Lumber Company

Richard J. Kreis

Orvall Kuester

Daniel, Dick and Florence Kulawinski

KYSS Radio

Gred Lakes

Fordon E. Larson

Erick Lee

Lewiston Chamber of Commerce

Fred Lidinsky

Les Limendoll

James Lotan

Louisiana Pacific Corporation

Dean Lundberg

Charles Mabbolt

Nancy and Bill Maki

Rusty Mattson

Montana Women in Timber

McGregor Company

Mei McLean

Larry Mehlhaff

James Menakis

Paul Meyernoff

Larry Hihnala

Varry and Cindy Holben

Tim Homes

David L. Hook

Helen Hudson

Jeff Huls

ID Div of Economy & Community Affairs

Idaho Attorney General

Idaho County Commissioners

Stan Hamilton

Idaho Dept. of Water Resources

Idaho Fish and Game Dept.

Tom Glass

Idaho State University Library

Idaho Trans. Dept., Div of Highways

Inland Northwest Wildlife Council

Mr. and Mrs. Bob Ivie

James M. Jahner

Bennie James

Reuel G. Janson

Don Jenni

Bill Johnson

Craig A. Johnson

Donald Johnstone

Don Karen

KDXT 93-KGRZ Radio

Chris Kelly

Karen Kimball

Howard G. Kirk

KLYQ Radio

KPAX-TV

Adams G. Kryns

KUFM Radio

KYLT Radio

Harry A. Lafriniere

Gloria Langstaffs

Marvin Slind

Anita Lewis

R. J. Lewy

Burt Lillis

Delmas Lossing

Ken Loucks

Richard J. Leaumont

Robert Scott Lutz

Dave Majors

George Matteson

Lawrence and Emma May

L.D. McFarland Company

Lori McIntosh

Gurney J. McMillen

Rick Meis

Thomas Menten

John Mikesell

Charles J. Miller Tom Miller

Missoula White Pine Sash

Jim Mitchell

Montana Audubon Council

Montana Depart. Fish, Wildlife, Park Montana Department of Commerce

Montana Department of Health & Environment Sciences Montana Department of State Lands; Helena, Missoula

Montana Department of Fish & Wildlife

Montana Mining Association Montana State Library

National Trail Bike Riders, Assoc.

Floyd Morris

Moscow-Latah County Library Bureau of Water Quality

Chuck Nelson

Nez Perce Forest Resource Dept. Grass Roots for Multiple Use

Kevin O'Brien

Missoula County Rural Planning Grangeville Chamber of Commerce

Ms. Diane Palmatier Gale A. Palmer

Lewiston Chamber of Commerce

Dean Pearson Rodney D. Petersen Linda Pietarinen Planning, Mc Call, ID

Plum Creek Timber Company; Missoula & Columbia Falls

Division of Economic & Com. Affairs, ID

Post-Register

Potlatch Corporation; Lewiston & Headquarters

Lee Pyle Jeffrey Rain W. L. Reynolds David Richerson Dave Rittersbacher Peggy Rubles

Ralph Rosenberg

Mineral County Commissioner

Dave A. Rubbins Ronald W. Ryle, Jr. Ralph Saperstein Cliff Schnider Alfred A. Schroeder SCS - Snow Surveys Senator Elmer Severson Richard A. Sherry

Sleeping Child Planning Group

Scot Smith Melvin J. Snook

Soil Conservation Service: Bozeman, Washington D.C.

Everett Miller

Missoula Snowgoers

Missoulian

Montana Advisory Commission Montana Bureau of Mines

Montana Department of Agriculture

Montana Logging Association Montana State Historical Preser. Montana State University, Libraries

Willis D. Moody Donald F. Morrow

Mt. Trail Vehicle Riders Assn. National Wildlife Federation

Francis M. Nelson Jerry Nicholls Terry Nobles Tom O'Bryan Hugh O'Riordan Charles E. Pace Dennis Palmer Tom Parkman

Dannette and Gary Payton

Dr. C. H. Strauss Philipsburg Mail Nez Perce Tribal Comm.

Porterbilt Post & Pole Company

Frank Leaf

Pyramid Mountain Lumber, Inc. Dan & Melody Rathbun Dr. G. N. Richards Jenny C. Ridinger David K. Robinson, Jr. Rock Creek Advisory Council

Barbara Ross Phillip W. Ryan Salmon Lirary Mike Schlesel Joseph C. Schoot Bob Scott W. A. Sears

James Borowicz

Sierra Club Legal Defense Fund

Brian Smith

Smithsonian National Associate Prog.

William Snook

Barbara J. Stephani Roxie L Stephens

Division of Environment, Idaho

Stone Container Ben Stout

Richard A. Strong

Representative Bernie Swift

Richard Tag

Amber and Jim Thiemens

Fred Thomas Ravalli Republic

Jim Toth

Rich Uberuaga

United Press International

University of Montana, Dept. of Wildlife Biology

University of Montana, Library

National Oceanic & Atmospheric Administration; Washington D.C, Portland, OR

Rural Electrification Admin. Deerlodge National Forest Flathead National Forest Helena National Forest Kootenai National Forest

USDA Forest Service, Northern Region Wallowa Whitman National Forest

USDA Forest Service, Intermountain Region

Salmon National Forest Wisdom Ranger District Charles P. Van Epps Terry Van Hoozer Mark Von Lindern

W-I Forest Products, L.P.

Washington State Bowhunters

R. E. Watson Gale Weeks C. A. Wellner

Evelyn Bonnie Wetzler Wilderness Society Kevin L. Williams.

Cont. Divide Trail Society Wesley & Jo Ann Woodgerd

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Gene Vuckovich

Washington Pilots Association

Gary and Ellen Watson

Everett Weaver Randy D. Weller

Western Wood Products Association

Wild Allan Mountain

Orv. Willard Harry E. Wilson William G. Wood Trent & Marilyn Woods

Victor D. Wright D. F. Zabel Ray Zielinski

Carl Thomas Zmuda

BITTERROOT NATIONAL FOREST Land and Resource Management Plan

Amendment Number 8 May , 1992

Amend Forest Plan Resource Standard 2.n. (1), (Forest Plan, September, 1987, page II-29) as follows:

Replace:

- 2. Resource Standards
 - n. Special Uses
 - (1) New outfitter and guide permits for traditional uses will be considered only when the services offered by existing outfitter are fully utilized. Proposed transfer, termination or relinquishment of permits operating at less than 100 service days will be considered for phasing out or reallocation of the service days to other current permit holders, to provide for more economic operations.

With:

- 2. Resource Standards
 - n. Special Uses
 - (1) New outfitter and guide permits for traditional uses will be considered only when the services offered by existing outfitters are fully utilized, except as follows:
 - New day use outfitter and guide float fishing permits for the West Fork of the Bitterroot River, downstream from Painted Rocks Lake, will be considered if the applicants are licensed outfitter and guides.

Proposed transfer, termination or relinquishment of permits operating at less than 100 service days will be considered for phasing out or reallocation of the service days to other current permit holders, to provide for more economic operations.

DECISION MEMO

ISSUANCE OF OUTFITTER/GUIDE FLOAT FISHING PERMIT TO JOSEPH D. BINER

Bitterroot National Forest West Fork Ranger District Ravalli County, Montana

Location: The proposed special use permit would authorize Joseph D. Biner to utilize specified river launch sites on National Forest Land, to access the West Fork of the Bitterroot River for float fishing trips. Mr. Biner has requested to launch approximately 20 commercial trips per year from March through November. The launch sites would be located adjacent to the West Fork Bitterroot River, downstream from Painted Rocks Lake, to the Forest boundary in Section 24, T2S, R21W, PMM. West Fork Highway 473 parallels this segment of the West Fork River. The permitted area would be approximately 17 highway miles of intermingled private land and National Forest land. The mixture of private and National Forest land along this segment of river is approximately 9 miles of private land and 8 miles of National Forest land. The special use permit area is roughly 16 miles southwest of Darby, Montana,

Proposed Action: The proposed action is to approve Mr. Biner's special use permit application and issue him a special use permit for launching guided float fishing trips on the West Fork Bitterroot River, from specified launch sites on National Forest land. The specified sites would be located downstream from Painted Rocks Lake, and would be approved yearly on the annual operating plan for the permit. The permit would be issued as a temporary day use outfitter/guide permit for the first two years. If Mr. Biner's performance as a day use river outfitter/guide is acceptable on a yearly basis, for the first two years, the permit would be renewed as a 5 year term, day use outfitter/guide permit. The annual renewal of the temporary permit and issuing of the 5 year term permit would be implemented without further NEPA (National Environmental Policy Act) analysis.

Scoping and Public Involvement: Scoping of this proposed action was done through a West Fork Ranger District NEPA project open house held at the Bitterroot National Forest Supervisor's Office in Hamilton, Montana on December 13, 1991; through a special interest group NEPA project meeting with the Friends of the Bitterroot in Hamilton, Montana on March 12, 1992; and a newspaper public notice of the proposal in the Ravalli Republic Newspaper, published April 14, 1992. A letter describing the proposed action was also sent to the Regional Supervisor of the Montana Department of Fish, Wildlife & Parks, asking if the Department had any comments on the project. Two issues were received from members of the public. No comments were received from the Montana Department of Fish Wildlife & Parks. Issues received from the public were:

- 1. Fishing pressure from floaters will reduce or eliminate the West Fork River fishery.
- 2. The two existing outfitter/guides permitted to launch from National Forest land adjacent to the West Fork River are currently too many outfitters on a river as small as the West Fork. No additional outfitter/guide permits should be allowed on the West Fork River.

Forest Service personnel added the following concern to issues which need to be addressed in this analysis.

3. The Bitterroot National Forest Plan; page II-29, n. (1); implements the following standard. "New outfitter and guide permits for traditional uses will be considered only when the services offered by existing outfitters are fully utilized." Fishing is considered a traditional use and it has not been proven that the services offered by the existing fishing outfitters are being fully utilized.

Response to Issues or Concerns:

- Issue 1: The Forest Service can not regulate fishing pressure on the West Fork River. Fishing regulations are the authority of the Montana Department of Fish Wildlife and Parks. This department is currently regulating fishing pressure on the West Fork River through Montana State Fishing regulations such as fishing seasons, bag limits, and catch and release regulations. Some publics feel the Forest Service can help reduce fishing pressure by not permitting any new outfitter/guides to utilize National Forest lands adjacent to the West Fork River. This would be true if the Forest Service controlled all access to the river. The outfitting and other publics currently have access to the River from private land and highway right away adjacent to the river. This private land and highway right of way is intermingled throughout the entire segment of the river downstream from Painted Rocks Lake. Thus prohibiting launching float trips from National Forest land would not eliminate use of the West Fork River by the segment of the public which elects to use outfitter/guides to provide the float fishing service. Permitting outfitters to utilize specified launch sites on National Forest land, would help eliminate launching from highway right-of-way, which can be a safety hazard.
- 2. Issue 2: Mr. Biner is currently a licensed outfitter through the Montana State Outfitter/Guide Licensing Board. He has been operating as a licensed outfitter/guide for the last five years, launching from private land adjacent to the West Fork Bitterroot River and has also conducted float fishing trips on the Bitterroot and other rivers. Mr. Biner is not a new outfitter/guide on the West Fork Bitterroot River. His use of the river has already been established. Permitting Mr. Biner to launch float fishing trips from National Forest land would allow him additional launch sites for a fee paid to the Federal government. Denying Mr. Biner the permit, however would not eliminate his options to conduct commercial float fishing trips on the West Fork of the Bitterroot River.
- Issue 3: Issuing Mr. Biner an Outfitter/Guide permit to launch commercial float fishing trips on the West Fork River would not be consistent with Resource Standard n.(1), page II-29; of the Bitterroot National Forest Plan. Although Mr. Biner is not a new outfitter/guide on the West Fork River, a permit for him to launch commercial float fishing trips from National Forest land, would be a new day use fishing, outfitter/guide permit for the West Fork Bitterroot River. Thus, if the decision is made to issue Mr. Biner the permit, a minor, site specific amendment to the Bitterroot National Porest Plan must be included with the decision and approved by the Bitterroot National Forest Supervisor. The amendment would exempt the West Fork to the Bitterroot River, downstream from Painted Rocks Lake, from the standard of considering new outfitter and guide permits only when the services offered from existing outfitters are fully utilized. The intent of Forest Plan Standard n. (1) was not to permit any new hunting and fishing outfitters on National Forest lands until the services of existing outfitters are fully utilized. Mr. Biner is a Montana State licensed

outfitter and guide, who has been offering commercial float fishing trips on the West Fork of the Bitterroot River for the last 5 years. Thus he is not a new outfitter/guide on the West Fork of the Bitterroot River.

Justification for Categorical Exclusion: There are categories of routine administrative and maintenance actions which normally do not have a significant effect on the quality of the human environment (FSH 1901.15, ID No. 3). This proposed action is similar to category 26.2(3) and would have no more environmental impact than other categories which are categorically excluded from documentation in an environmental impact statement or an environmental assessment (40 CFR 1508.22).

Findings of Consistency With the Forest Plan and Other Laws: As indicated in Issue 3, the decision to allow new outfitter and guide special use permits is not consistent with a Forest Plan Standard. Therefore, as part of the decision to implement this proposed action, the wording in Bitterroot Forest Plan Resource Standard n. (1), page II-29 would be changed from:

New outfitter and guide permits for traditional uses will be considered only when the services offered by existing outfitters are fully utilized. Proposed transfer, termination or relinquishment of permits operating at less than 100 service days will be considered for phasing out or reallocation of the service days to other current permit holders, to provide for more economic operations.

to

New outfitter and guide permits for traditional uses will be considered only when the services offered by existing outfitters are fully utilized, except as follows:

- New day use outfitter and guide float fishing permits for the West Fork of the Bitterroot River, downstream from Painted Rocks Lake, will be considered if the applicants are licensed outfitter and guides.

Proposed transfer, termination or relinquishment of permits operating at less than 100 service days will be considered for phasing out or reallocation of the service days to other current permit holders, to provide for more economic operations.

This change in Forest Plan Forest-wide Resource Standard n.(1) does not significantly alter Forest Plan goals and objectives, or the long-term relationship between levels of multiple-use goods and services. The change is a minor change in the standard and is therefore a non-significant amendment to the Forest Plan.

With implementation of this non-significant amendment, the proposed action would be consistent with the Bitterroot National Forest Plan.

Documentation of this categorical exclusion in the form of a Decision Memo and the District's corresponding project file are in compliance with the National Environmental Protection Act (NEPA). Decision: My decision is to approve the proposed action and the non-significant, site specific amendment to Bitterroot Forest Plan Resource Standard n.(1), page II-29, as discussed above in this decision memo. The Forest Service can not regulate fishing pressure on the West Fork River (reference Issue 1 discussion in this document). As discussed in Issue 2, Mr. Biner is currently a Montana State licensed outfitter/guide, conducting commercial float trips on the West Fork of the Bitterroot River. Prohibiting him from launching commercial float fishing trips on National Forest land will not eliminate an outfitter on the West Fork of the Bitterroot River. Allowing him the option of launching from National Forest land will provide additional revenue to the Federal treasury and provide another option for launching other then private land and road right of way. As previously discussed, the non-significant, site specific amendment, as stated above, will not change the intent of Forest Plan Resource Standard n.(1), page II-29.

Implementation Date: This decision may be implemented seven days following the publishing of the Legal Notice of Decision in the local newspaper.

Administrative Review or Appeal: This decision is subject to administrative review and appeal pursuant to 36 CFR Part 217. A written notice of appeal must be filed in duplicate with the next higher line officer in accordance with 36 CFR Part 217.9 within 45 days of the date this decision is published in the Ravalli Republic newspaper (Hamilton, MT).

Contact Person: For additional information concerning this decision, contact Jim Aronson, Resource Coordinator, West Fork Ranger District, 6735 West Fork Road, Darby, MT, 59829 (telephone 406/821-3269).

Approved by:

STEPHEN K. KELLY

Forest Supervisor

Deter

May 21, 1992

Forest Service Bitterroot National Forest 1801 North 1st St. Hamilton, MT 59840

Reply to: 1920

Date: July 10, 1992

Dear Forest Planning Participant:

The enclosed Decision Memo allows a boat launch site to be constructed along the West Fork of the Bitterroot River. To implement this construction the Bitterroot Forest Plan was changed, Amendment 9, to provide for this use.

If you have any questions please contact Kerry McMenus, Planning Staff Officer, Bitterroot National Forest, 1801 North 1st Street, Hamilton, Montana 59840, (406) 363-3131.

Sincerely,

STEPHEN K. KELLY Forest Supervisor

Enclosure



BITTERROOT NATIONAL FOREST Land and Resource Management Plan

Amendment Number 9 July, 1992

Management Area 10 will be changed to include the boat launch site (34 sites rather than 33) and the Recreation Standards will be changed to allow this site in the riparian area. Amend Forest Plan Resource Standard O.3.a.(3), (Forest Plan, September, 1987, page III-69) as follows:

Replace:

(3) No facilities will be built in riparian zones. Existing facilities will be rehabilitated to protect riparian zones from human impact.

With:

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat faunch facility on the West Fork of the Bitterroot River (near the West Fork Ranger Station in the SE 1/4 , Section 19, T1N, R21W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impacts.

DECISION MEMO

WEST FORK RIVER BOAT LAUNCH SITE

Bitterroot National Forest West Fork Ranger District Ravalli County, Montana

Decision: My decision is to implement Alternative 4 and construct a boat launch site near the West Fork Ranger Station in the SE1/4, Section 19, T1N, R21W, PMM. See the description of Alternative 4 for details. This action requires a non-significant, site specific Forest Plan Amendment. It is my decision to add this site to the specific developed recreation sites under Management Area 10 and to change the Recreation management standard to allow for this facility to be built in the riparian zone (pg. III-69, item 3.a.(3)). See the "Findings of Consistency with the Forest Plan and Other Laws" for more detail.

Rationale for the Decision: The decision to build a boat launching site on the West Fork River is supported by the purpose and need for the proposal. There are no developed public boat launching sites adjacent to the West Fork Bitterroot River. River floaters are utilizing undeveloped sites on forest land, private land, and road right-of-way adjacent to the river. One road right-of-way launching site used quite frequently is adjacent to a curve on Nez Perce Road 468, in the SW1/4, Section 30, T1N, R21W, PMM. Launching from this site can create a safety hazard to traffic utilizing the Nez Perce Road. Access to some of the undeveloped launching sites along the West Fork River is not very accommodating for disabled persons and to vehicles pulling a trailer. Constructing a new public boat landing, with good access off West Fork Highway 473, and a parking lot provides a safe alternative to utilizing some of the less desirable access points along the river.

Specifically, Alternative 4 responds to the issues identified in the scoping process better than any of the other alternatives. (See the "Scoping and Public Involvement" and "Alternatives Considered" for elaboration of the issues and alternatives.) The no action alternative would not meet the need for a developed boat launch site (Issue 1). As indicated in the Issue 2 discussion, the Montana State Department of Fish, Wildlife and Parks has the authority and capability to regulate fishing pressure on the West Fork River. Social conflicts will be self-regulating or can be regulated with a permit system if the need arises. Alternative 4 will require more clearing of trees (Issue 3) than the other alternatives, but the total clearing area is small and avoids cutting most of the large ponderosa pine trees in the area. The additional clearing required is a good trade off in terms of the other more favorable benefits of Alternative 4. Alternative 4 locates the boat launch site upstream from the whitewater most of the floaters expressed a desire to float (Issue 4). The site is downstream from the Nez Perce Fork which will take advantage of the water from the Nez Perce Fork of the river to extend the length of the float season (Issue 5). The boat launch spur would be surfaced with compacted smooth rock to eliminate angular rock which can poke holes in a raft (Issue 6) and provide a hard surface for vehicles to access the river for disabled person access (Issue 11). Funds appropriated for this project cannot be utilized for river cleanup or patrolling the river (Issue 7). The site is located far enough away from residents to minimize social conflict with residents (Issue 8). Appropriate signing and monitoring of the site should eliminate undesirable uses of the site. Alternative 4 has the added advantage of being located approximately 1/4 mile from the West Fork Ranger Station, for easy monitoring of the site (Issue 9). As indicated in the Issue 10 discussion, none of the alternatives are likely to have adverse impacts on wildlife in the area. Alternative 4 is located within one mile of the Nez Perce Road curve where launching of boats creates a safety hazard. It provides the desirable floating opportunities that floaters launching from the road curve would receive, without the hazard of trying to launch off a road curve and find a parking space. Thus, Alternative 4 will best eliminate the problem of floaters launching from the Nez Perce road (Issue 12). With implementation of the non-significant, site specific amendment to the Bitterroot Forest Plan, Alternative 4 will be consistent with the Forest Plan (Issue 13).

Scoping and Public Involvement: Scoping of this proposed action was done through a West Fork Ranger District NEPA project open house held at the Bitterroot National Forest Supervisor's Office in Hamilton, Montana on December 13, 1991; through a special interest group NEPA project meeting with the Friends of the Bitterroot in Hamilton, Montana on March 12, 1992; and a newspaper public notice of the proposal in the Ravalli Republic Newspaper, published April 8, 1992. Many comments were received from the public. Most of the comments were in favor of the boat launch site but wanted it constructed in an alternate location, upstream from the whitewater in the Boulder Creek area, but downstream from the Nez Perce Fork of the West Fork River. The following issues were received from members of the public and Forest Service personnel.

- Issue 1: Is there a need for additional floating access to the river?
- Issue 2: Would additional access to the river put to much floating pressure on the West Fork River (fishery and social conflicts)?
- Issue 3: Could the launch site be built without additional clearing for access and the parking area? If clearing is necessary, can the beautiful large pines be preserved?
- Issue 4: Could the landing be constructed at a different location.

 somewhere above the rapids between Steep Creek and the West Fork
 Ranger Station?
- Issue 5: Could a suitable location to optimize the float season be found?
- Issue 6: Would the raft launching site be surfaced with material which would not poke holes in inflatable rafts?
- Issue 7: Could the money used to build the boat launch site be better utilize for patrolling the river and keeping the river clean?
- Issue 8: Could a developed boat launch site be located away from a residential area to avoid conflicts with users and residents living along the river?
- Issue 9: Would a developed site draw unwanted use such as parties, and

increase trash and human waste problems on the site?

- Issue 10: Would the site adversely affect wildlife populations such as deer, elk, moose, otter, beaver, and water fowl?
- Issue 11: Would the site be accessible for disabled people?
- Issue 12: Where would the best location for the landing be to eliminate the traffic hazard of people putting rafts in the river from the Nez Perce Road curve?
- Issue 13: Would constructing a portion of a boat launch site in a riparian area and in Forest Plan Management Area 3a be consistent with the Bitterroot National Forest Plan?

Response to Issues:

Issue 1: There is a need for additional floater access to the river. The fact that floaters are currently launching from undeveloped sites and road right-of-ways that do not meet standards for safety, disabled person access, and adequate parking and turnaround space, demonstrates the need for additional floating access to the river.

Issue 2: Floater use of the West Fork River is probably going to increase in future years regardless of whether safe boat launching sites are developed. With increased floater use, fishing and social pressures from river floaters will also increase. The Forest Service cannot regulate fishing pressure on the West Fork River. Fishing regulations are the authority of the Montana Department of Fish Wildlife and Parks. This department is currently regulating fishing pressure on the West Fork River through Montana State Fishing regulations such as fishing seasons, bag limits, and catch and release regulations. Some publics feel the Forest Service can help reduce fishing pressure by not developing any boat launching sites on National Forest lands adjacent to the West Fork River. This would be true if the Forest Service controlled all access to the river. River floaters currently have access to the River from undeveloped sites and road right-of-ways adjacent to the river. These sites do not meet safety standards and other boat launching site design criteria, but floaters will continue to use them unless alternative sites are developed. Social conflicts from floaters using the river will likely increase, but will probably be self-regulating. The location of the river, adjacent to the highway and several residences, eliminates the possibility of solitude and no people contacts. Thus floaters using the river expect to meet other people floating, fishing and traveling along the river. The floaters looking for solitude will seek other places to float. If self regulation for floating social pressures does not work, the option of implementing a permit system to regulate social pressures is available, and should be utilized rather than not developing adequate boat launching sites.

Issue 3: Some clearing of trees would be required in all action alternatives developed and analyzed. The amount of clearing varies by site location but is less than one quarter of an acre on all alternative sites. The site locations were chosen to minimize the need for cutting large

ponderosa pine trees. Estimated clearing areas for the alternatives developed are: Alternative 1 (no action), 0 acres; Alternative 2 (proposed action) 0.1 acre; Alternative 3, less than .1 acre; Alternative 4, .2 acre; and Alternative 5, less than .1 acre. Alternative 4 would require cutting 3 large Ponderosa Pine trees in the access road right-of-way. Alternatives 4 and 5 would require some understory brush clearing and overstory tree thinning along highway 473 to extend highway sight distance from the boat launch access roads.

Issue 4: Alternative sites for the proposed boat launch site were developed due to issues brought out in the scoping process. The alternative sites considered are described in this document.

Issue 5: The floating season length will vary according to the timing and amount of runoff, precipitation received, and closing and opening of the Painted Rocks Dam gates, on a yearly basis. In general, water levels for rafts, cances and kayaks will be high enough to float from April through July under Alternatives 2, 3, and 4. Floating season length for Alternative 5 is much shorter, normally the month of May, because it is located above the mouth of the Nez Perce Fork of the West Fork River.

Issue 6: All action alternatives would surface the river access spur with rounded smooth rock. Crushed rock could be utilized on the parking lot and highway access road.

Issue 7: The money which would be utilized to construct the boat launch site is recreation and engineering capital investment money which is designated for trailhead capital investment projects only. Therefore it must be utilized for constructing river access or other trailheads. It cannot legally be used for other purposes.

Issue 8: None of the action alternative boat launch sites are located on the doorstep of residences along the West Fork River. Approximate distances of the closest residence from the alternative launch site locations are: Alternative 2 and 3, 4/10 mile, Alternative 4, 1/4 mile, and Alternative 5, 1/4 mile.

Issue 9: Developing a boat launch site along the West Fork River would increase the potential to draw unwanted use such as parties and overnight camping. The site would be signed as a boat launching river access site. Other signs such as no overnight camping or picnicking, and pack-it-in. pack-it-out, would be utilized to prevent camping, picnicking and littering. The Sam Billings and Rombo campgrounds are located close to the alternative launch sites, thus alternative camping and picnic areas are available in the vicinity, for people seeking these uses. A toilet would be included in the design plan so it could be constructed if a human waste problem developed. A garbage can would be installed at the site if a litter problem developed. The site would be monitored for unwanted parties, by the District Recreation Staff, Forest Law Enforcement Officer, and through a Co-op agreement with the Ravalli County Sheriff Department. The Co-op agreement is already in existence for other recreational sites on the West Fork Ranger District. The patrols pass the alternative sites, and could stop at the sites when they go by. The Ranger Station is also located close to the alternative sites, making it easier to monitor the sites.

Issue 10: All the sites are located in areas used by deer, moose and elk. The potential for use of all the alternative sites by otters, beavers, water fowl and other species utilizing water and streamside habitat exists. It is unlikely that the development of a boat launching site in any of the alternative locations would adversely affect any of these wildlife populations because the sites are designed small and the animals utilizing the sites are already accustomed to seeing people. Deer and moose live close to and pass through the West Fork Ranger Station, and other resident areas located along the West Fork River, year round. Elk usually do not utilize the areas in the summer time but do utilize them in the winter. The residents and people living in these areas do not seem to curtail the use of the areas by animals. A developed boat launch site would have less impact on these animals than the residences because people would only be utilizing the site for short periods of time during the float The people living in the residences are at their homes the majority of the time, year round.

Issue 11: All alternatives would develop sites accessible for disabled people. Alternatives 2 and 3 would be the most difficult to provide access for disabled people because of the topography. A trail approximately 200 feet long would have to be constructed down to the river for wheelchair access. Alternatives 4 and 5 would be constructed on topography that would enable vehicles to back down to the river for easy access for all people.

Issue 12: Alternative 4 would provide the best alternative for floaters wanting to launch off the curve adjacent to the Nez Perce Road. It is located above the whitewater stretch most of the floaters like to float; is located downstream from the Nez Perce Fork of the river, providing a longer float season than Alternative 5; and provides a reasonable alternative to launching rafts from the Nez Perce road curve since it is located approximately one mile downstream from the curve. Alternatives 2 and 3 are located downstream from the whitewater stretch most floaters like to float, and further away from the Nez Perce road curve were boat launching creates a traffic hazard.

Issue 13: The alternative locations are currently located in Forest Plan Management Areas 3a and 3b which provide management direction to manage for recreational activities associated with lakes and streams. If a boat launch site is developed, the site would be managed by direction provided under Forest Plan Management Area 10 (developed recreational sites). Constructing a portion of the boat launch site in a riparian area and in Forest Plan Management Area 3b, would not be consistent with Management Standard E.3.a.(3)., page III-23 or Management Standard 0.3.a.(3), page III-69 of the Bitterroot National Forest Plan. The action alternatives would all construct a boat launching trail or road to the edge of the West Fork River, to transport rafts, canoes, and boats to the river and provide river access for disabled people. Currently there are no developed recreational sites on private land open to the public, or on forest land that provide good access to the river for disabled people. Discussion with Bob Bigler, Bitterroot National Forest Planning Staff Officer, and Chuck

Troxel, Bitterroot National Forest Recreation Staff Officer, reviewed that there was no intent to prohibit development of boat launch sites adjacent to floatable rivers within National Forest Land. The intent of the standards identified above was to prohibit development of recreational facilities in riparian areas if they are not needed to cross the areas or associated with river or lake access. If an action alternative is selected, a site specific, non-significant amendment to allow construction of a boat launch site adjacent to the West Fork of the Bitterroot River, will have to be included with the decision.

Alternatives Considered: The following alternatives were developed: A general location map and design drawings for the developed alternative sites are located in the project file for this NEPA analysis.

Alternative 1 (No Action) No developed boat launching site would be constructed. No additional signing would be put up for existing undeveloped sites.

Alternative 2 (Proposed Action): A developed boat launch site would be constructed adjacent to the West Fork of the Bitterroot River at the existing undeveloped site near Applebury Creek. This site is located downstream from the Nez Perce Fork of the West Fork River and whitewater between Steep Creek and the West Fork Ranger Station. The legal description for this location is the SE1/4, Section 17, T1N, R21W, PMM. Development would include a parking area for approximately 6 vehicles with trailers, a new access road from West Fork Highway 473 to the parking lot, access to the river for vehicles, and a turnaround. The access approach would be at a right angle to the highway with at least 500 feet of highway site distance on both sides of the approach. The parking lot, access routes and turnaround would be surfaced with gravel. The access road would be a single lane road (14 foot surface) with widening at the approach and curves. Access for disabled people would be provided by a hard packed trail from the existing dispersed camping site to the river. Rounded, smooth gravel would be utilized for the raft launching spur to eliminate sharp rocks which could poke holes in the bottom of rafts. Approximately one-tenth acre of trees, mostly lodgepole pine and Doulgas-fir, would be cleared for the access route and turnaround. The parking lot would be developed in an existing clearing. The existing access road with it's bad approach angle would be closed off and revegetated.

Alternative 3: The boat launch site would be developed at the Applebury site with minimal disturbance by taking advantage of the existing access route and clearing at the site. The approach off Highway 473 would be reconstructed to eliminate the bad angle. The rest of the existing access road to the clearing and river would be utilized. The existing clearing would be utilized for the parking lot. Access to the river would be provided by improving a foot trail so rafts could be carried from the river access road approximately 30 feet to the river. A turnaround would be constructed at the end of the river access road. Disabled access would be constructed as indicated in Alternative 2. Less than one-tenth acre of lodgepole pine and Douglas-fir trees would have to be cleared for the approach off Highway 473 and the turnaround at the end of the river access

road. The standards for the construction would be the same as Alternative 2.

Alternative 4: The boat launch site would be constructed near the West Fork Ranger Station in the SE1/4, Section 19, T1N, R21W, PMM. This site is located downstream from the Nez Perce creek entry into the West Fork River and above the whitewater between Steep Creek and the West Fork Ranger Station. The construction would require clearing approximately two-tenths of an acre of mostly lodgepole pine trees and 3 large ponderosa pine trees for the access road and parking lot. Some understory brush clearing and thinning of overstory trees would also occur adjacent to highway 473 to extend highway sight distance west of the boat launch site access road. The parking lot would accommodate six vehicles with trailers. Standards for the construction would be the same as Alternative 2. The topography is flat enough so vehicles can be backed down to the river to unload rafts and provide disabled persons access. The access road would loop around the parking lot so no turnaround would need to be constructed. The eddy for launching boats at this site is small and would be enlarged by digging a 8 foot by $\hat{8}$ foot extension down to the floatable water level. The excavation would be done during low water levels, so silt from the excavation would not enter the river. The disturbed area would be graveled with river washed gravel to minimize silt entering the river in the future. access approach off Highway 473 would be at a right angle with at least 500 feet of clear site distance for entering or leaving the highway. Some fill would be needed for the approach off the highway, parking lot and river access. The fill material would be hauled in from a dispersed camping area approximately 1/4 mile east of the boat launch site and the Ditch Creek public pit. Fill material from the dispersed camping site would be obtained from cutting the road grade into the camping area, the camping area, and the back slope behind the camping area, down. The current grade exceeds 12 percent.

Alternative 5: This alternative would develop the boat launch site at the old bridge site approximately 1 mile south of the West Fork Highway and Nez Perce Road intersection. The site is located upstream from the Nez Perce Fork of the West Fork River. The legal location of the site is the NE1/4, Section 36, T1N, R22W. PMM. The existing approach site would be moved to increase site distance for highway. Fill for the new approach and parking areas would be provided by digging out the old road approach. Existing openings within the area would be utilized to develop a two stage parking area for 6 vehicles with trailers. Less than one-tenth acre of clearing, mostly lodgepole pine trees would be required for the access road and parking lot. Some additional brush clearing and overstory tree thinning would also occur to increase highway sight distance south of the boat lauch site access road. A loop road around the parking lot would eliminate the need for a turnaround. The topography is flat enough so vehicles can back down to the edge of the river, providing access for the disabled. Standards for the construction would be the same as Alternative 2.

The following alternatives were considered and rejected form further analysis.

An alternative to construct a boat landing in the Piquett Creek area was suggested in the scoping process. Piquett Creek is located approximately 4

miles downstream from the proposed Applebury site location. A boat launch site in this area would have a slightly longer float season due to more water flowing into the West Fork River from tributary creeks, downstream from the other alternative locations. This alternative was rejected because it would not meet the objective of providing an alternative for launching from the curve on the Nez Perce Road right-of-way. Most of the comments from river floaters, suggested we develop a boat launching site upstream from the whitewater between Steep Creek and the West Fork Ranger Station. This site would also not meet that need. It is apparent from existing use, that floaters seeking the whitewater experience will continue to launch off the curve on the Nez Perce road unless an alternate location in that vicinity is provided. A site in the Piquett Creek area or further downstream should be considered in the future, to provide another disabled person river floater access point.

Other alternatives considered and rejected were to develop a site at the existing short river access spur across from the West Fork Ranger Station, or in the old horse pasture also across from the Ranger Station. The existing river access spur was rejected because it does not have adequate room between the highway and river to develop the site and has inadequate highway site distance from the approach off the highway. The old horse pasture was eliminated because access to the river would require crossing Ward Creek which merges into the West Fork River at an angle just down stream from this site. Ward Creek is wide enough to require an expensive crossing, but is not large enough to permit floating.

An alternative of putting boat launch site signs at the existing undeveloped sites at Applebury Creek and the old bridge site (Alternative 2 and 5 locations) and putting up no boat launching signs at the curve on the Nez Perce Road was also considered. This alternative was rejected because the existing undeveloped sites do not meet criteria for highway approach site distance, disabled access, and turnarounds. Therefore, the Forest Service cannot encourage use of these sites by signing them as boat launch or river access points. A no boat launching sign at the Nez Perce road curve would eliminate some floaters from launching from that site, but would require a lot of enforcement unless a reasonable alternative site is provided in the vicinity of the curve.

Justification for Categorical Exclusion: There are categories of routine administrative and maintenance actions which normally do not have a significant effect on the quality of the human environment (FSH 1901.15, ID No. 3). This action is covered under category 26.1b(2), "Construction of low-impact facilities or improvements, such as auxiliary support buildings or other structures; picnic areas and campgrounds, temporary and other low-standard roads, such as traffic level "D" roads and Trails."

Findings of Consistency With the Forest Plan and Other Laws: The selected alternative boat launch site is located in Forest Plan Management Areas 3a and 3b. Management Area 3a direction is to maintain the partial retention visual quality objective, manage timber, and emphasize roaded dispersed recreation activities, old growth and big game cover. Further direction includes: manage to provide recreation opportunities associated with main access roads and fishing streams. Management Area 3b direction is to manage riparian areas to

maintain flora, fauna, water quality and water-related recreation activities. As indicated in Issue 13, action alternatives are not consistent with the Bitterroot Forest Plan Standard for managing riparian habitat (E.3.a.(3), page III-23).

If a boat launch site is constructed, the site will become a developed recreation site and would more appropriately be managed under direction for Management Area 10. Management direction for Management Area 10 is to provide developed recreation facilities which are not provided locally by the private sector. Standards also maintain existing sites and protect riparian zones from human impacts.

Openings for the boat launch access road and parking area under all action alternatives are small enough to meet the retention visual quality objective and not be detrimental to old growth and big game cover. The boat launch site alternatives are screened from the West Fork Highway by trees between the highway and parking lot.

Management Area 10 will be changed to include the boat launch site (34 sites rather than 33) and the Recreation Standard will be changed to allow this site in the riparian area. Standard 0.3.a.(3), page III-69 will be changed from:

(3) No facilities will be built in riparian zones. Existing facilities will be rehabilitated to protect riparian zones from human impact.

to

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (Near the West Fork Ranger Station in the SE1/4, Section 19, T1N, R21W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impact.

These changes in Forest Plan Standards, would not significantly alter Forest Plan goals and objectives, or the long-term relationship between levels of multiple-use goods and services. The changes would be minor and therefore a non-significant amendment to the Forest Plan. With the implementation of this non-significant amendment, all the action alternatives would be consistent with the Forest Plan.

Documentation of this categorical exclusion in the form of a Decision Memo and the District's corresponding project file are in compliance with the National Environmental Protection Act (NEPA). Construction of the boat launch site will comply with all State and Federal water quality laws.

Implementation Date: This decision may be implemented seven days following the publishing of the Legal Notice of Decision in the local newspaper.

Construction of this project will occur after mid-July when the West Fork River is at a low water level.

Administrative Review or Appeal: This decision is subject to administrative review and appeal pursuant to 36 CFR Part 217. A written notice of appeal must be filed in duplicate with the next higher line officer in accordance with 36 CFR Part 217.9 within 45 days of the date this decision is published in the Ravalli Republic newspaper (Hamilton, MT).

Contact Person: For additional information concerning this decision, contact Jim Aronson, Resource Coordinator, West Fork Ranger District, 6735 West Fork Road, Darby, MT, 59829 (telephone 406/821-3269).

Approved by: ,,

STEPHEN K. KELLY

Forest Supervisor

Date:

Reply to: 1920

Date: February 22, 1992

Dear Forest Planning Participant:

The enclosed Decision Notice allows a disabled fishing pier and trail to be constructed in the Spring Gulch Campground on the East Fork of the Bitterroot River.

To implement this construction the Bitterroot Forest Plan was changed (Amendment 10) to provide for this use. A copy of Amendment 10, Spring Gulch Disabled Fishing Pier and Trail Environmental Analysis, is also enclosed.

If you have any questions please contact Kerry McMenus, Planning Staff Officer, Bitterroot National Forest, 1801 North 1st Street, Hamilton, Montana 59840, (406) 363-7120.

Sincerely,

STEPHEN K. KELLY Forest Supervisor

Enclosures



BITTERROOT NATIONAL FOREST Land and Resource Management Plan

Amendment Number 10 February, 1992

The Recreation Standard will be changed to allow this site in the riparian area. Amend Forest Plan Resource Standard O.3.a.(3), (Forest Plan, September, 1987, page III-69) as follows:

Replace:

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (near the West Fork Ranger Station in the SE 1/4, Section 19, T1N, R21W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impacts.

With:

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (near the West Fork Ranger Station in the SE 1/4, Section 19, T1N, R21W, PMM).
 - (b) An accessible fishing pier on the East Fork of the Bitterroot River (adjacent to Spring Gulch Campground in the SE1/4, Section 1, T1N, R20W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impacts.

DECISION NOTICE

AND

FINDING OF NO SIGNIFICANT IMPACT

Spring Gulch Fishing Pier and Trall Environmental Assessment (EA)

> Sula Ranger District Bitterroot National Forest Ravalli County, Montana

> > February 1992

THE DECISION

It is my decision to implement Alternative 3 and construct fisheries habitat improvements, a fishing pier, and a trail in the Spring Gulch Campground which will meet accessibility standards for persons with disabilities. See the description of Alternative 3 for details. This action requires a non-significant, site specific Forest Plan Amendment. It is my decision to change the recreation management standard to allow for this facility to be built in the riparian zone (Forest Plan, Pg. III-69, Item 3.a.(3)). See the "Findings of Consistency with the Forest Plan and Other Laws" for more detail.

RATIONALE FOR THE DECISION

The decision to construct fisheries habitat improvements and an accessible fishing pier and trail on the East Fork River in Spring Gulch Campground is supported by the purpose and need for the proposal. There are no developed fishing access points along the entire length of the East Fork River. Access to the river is gained by use of several undeveloped access points along the narrow section of U.S. 93 from milepost 13 to milepost 16. These sites are somewhat hazardous as they do not meet standards for safety, disabled person access or adequate parking and turnaround space.

Specifically, Alternative 3 responds to the issues identified in the scoping process better than any of the other alternatives. (See the "Scoping and Public Involvement" and "Alternatives Considered" for elaboration of the issues and alternatives.) There are no developed fishing access points along the entire section of the East Fork of the Bitterroot River. There are several undeveloped sites that do not meet standards for safety, disabled person access, or adequate parking and turnaround space; this demonstrates the need for a developed fishing access point to the river (Issue 1). Increased fishing pressure due to development of a lishing access site is not expected (Issue 2) and the Montana Department of Fish, Wildlife, & Parks has the responsibility and authority to regulate fishing pressure on the East Fork River. Social conflicts such as the mix of day use and overnight camping (Issue 3) are self-regulating but can easily be controlled by designating parking areas for day use visitors. Alternative 3 provides river access to persons with disabilities; both the fishing pier and the trail would meet design criteria for wheelchair access (Issue 4). With implementation of the non-significant, site-specific amendment to the Bitterroot National Forest Plan, Alternative 3 would be consistent with Forest Plan Standards for Management Area 10 (Issue 5), but not precedent setting on national forest

lands (Issue 7). Alternative 3 would also improve habitat for fisheries by placement of rocks and logs in the river which would scour and maintain resting pools as well as provide high water protection (Issue 6).

ALTERNATIVES CONSIDERED

Chapter II of the EA contains a detailed description of the alternatives and how they were developed. Two action alternatives and a No Action alternative were analyzed in the EA.

Alternative 1: No Action - This alternative represents the existing condition. The campground will be upgraded to include accessible facilities such as toilets, tables, and fire rings. The road surface will be repayed and the camp units will be widened and lengthened to accommodate modern day recreational vehicles. No additional development would occur within the riparian area. The fishing pier and fisheries habitat improvements would not be constructed.

Alternative 2: Fisheries Habitat Improvements - This alternative would allow for the construction of the fisheries habitat improvements but the fishing pier and trail would not be built. Habitat improvements include placing approximately 20 to 30 large rocks in the river in 2 to 3 Rosgen vortex arrangements which will scour and maintain resting pools, as well as provide high water protection for fish. Several logs may be added to some of these structures to increase instream cover.

Alternative 3: Fishing Pler and Fisheries Habitat Improvements - This alternative would allow for the construction of the habitat improvements, the fishing pier, and a trail along the river. Implementation would result in construction of a fully accessible fishing pier and trail along the river to allow persons in wheelchairs or with other mobility impairment to have safe access to the river. The pier will measure 12 ft. X 30 ft. and provide access to some of the best pools in the area while the trail along the river will allow disabled persons to fish in several locations. The trail will not run directly adjacent to the river, it will be located approximately 10 feet from the high water line and be approximately 800 feet in length. Habitat improvements would consist of those described in Alternative 2 (placement of 20-30 rocks and several logs in the river adjacent to the campground to scour and maintain resting pools as well as provide high water protection for fish).

PUBLIC INVOLVEMENT

Scoping for this proposal was done by a news release in the Ravalli Republic on December 24, 1992. In addition, a letter was mailed to individuals on the Forest Plan mailing list describing the project and the need for a site specific Forest Plan amendment.

FINDING OF NO SIGNIFICANT IMPACT

I have determined that implementation of the selected alternative would not individually or cummulatively have a significant effect on the quality of the human environment. Therefore, an Environmental Impact Statement is not needed. This determination is based on the following factors:

A. Considerations of beneficial and adverse impacts.

This project will protect the riparian area from further resource damage and provide safe access to the river for persons with disabilities.

Consider the effects on public health and safety.

There would be a direct benefit to public safety upon completion of this project.

Consider unique characteristics of the geographic area.

There would be no unique cultural resources, park lands, prime farm lands, wetlands, wild and scenic rivers or ecologically critical areas affected by this proposal.

Consider the degree to which the effects are likely to be highly controversial.

The effects of this action on the quality of the human environment are not likely to be highly controversial.

E. Consider the degree to which the effects are uncertain or unknown.

There are no known effects on the human environment that are highly uncertain or involve unique risks that would occur as the result of implementing this proposal.

 Consider the degree to which this action will set a precedent for future actions with significant effects.

The construction of these facilities on the management area in the described alternatives would be an acceptable action. No precedents would be established.

G. Consider if the action is related to other actions with cumulative effects.

This proposal would no have cumulative significant effects with past management activities or activities in the reasonable foreseeable future.

H. Consider the degree to which the action may affect listed or eligible historic places.

There are no anticipated effects to cultural resources as a result of this project. A preliminary cultural resources inventory was completed in the summer of 1992. After final project design and before implementation of the project, an additional archaeological survey will be considered and conducted if necessary.

Consider the degree to which the action may affect Threatened and Endangered Species.

There are no threatened or endangered animal or plant species known to exist in the project area. No critical habitats would be involved.

 Consider whether the action threatens a violation of Federal, State, or local law or requirements for protection of the environment. Construction of these facilities does not violate any Federal, State, or local laws.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

Consistency with the Forest Plan

Implementation of Alternative 3, which allows for construction of a fishing pier and trail adjacent to the East Fork River, is inconsistent with Management Standard 0.3.a.(3), page III-69 of the Bitterroot National Forest Plan. Discussion with Bob Bigler, Bitterroot National Forest Planning Staff Officer, and Chuck Troxel, Bitterroot National Forest Recreation Staff Officer, during the analysis for the West Fork Boat Launch Site (a similar project), revealed that there was no intent to prohibit development of boating or fishing access sites adjacent to rivers within National Forest Land. The intent of the standards identified above was to prohibit additional development of campgrounds in riparian areas.

The Recreation Standard will be changed to allow this site in the riparian area. Standard O.3.a,(3), page III-69 will be changed from:

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (Near the West Fork Ranger Station in the SE1/4, section 19, T1N, R21W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impact.

to

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (Near the West Fork Ranger Station in the SE1/4, Section 19, T1N, R21W, PMM); and
 - (b) An accessible fishing pier on the East Fork of the Bitterroot River (adjacent to Spring Guich Campground in the SE1/4, Section 1, T1N, R20W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impact.

This change in Forest Plan Standards would not significantly alter Forest Plan goals and objectives or the long-term relationship between levels of multiple-use goods and services. The changes would be minor and therefore a non-significant amendment to the Forest Plan. With the implementation of this non-significant amendment, Alternative 3 would be consistent with the Forest Plan.

Compliance with Other Laws, Regulations, and Policy

This decision conforms to the National Environmental Policy Act of 1969 (NEPA), the council on Environmental Quality regulations for implementing NEPA, 40 CFR 1500-1508, July 1, 1986, the Multiple-Use Sustained-Yield Act of 1960, and the National Forest Management Act, 1976.

Selection of Alternative 3 is consistent with the principles in 36 CFR 219.1 for general resource management planning as well as the Bitterroot Forest Plan.

IMPLEMENTATION

The alternative will be implemented 45 days after legal notice of this decision is published in the Ravalli Republic Newspaper in Hamilton, Montana. I will proceed with the layout and design of Alternative 3, but no ground-disturbing activities or contractual agreements will occur prior to the 45 days.

APPEAL RIGHTS

This decision is subject to administrative appeal pursuant to 36 CFR Part 217. Written notice of appeal must be submitted within 45 days after publication of the legal notice in the Ravalli Republic. The notice of appeal must be sent, in duplicate to the following Reviewing Officer:

Regional Forester Northern Region PO Box 7669 Missoula, MT 59807

The notice of appeal must be fully consistent with 36 CFR 217.9 (Contents of the Notice of Appeal) and provide sufficient evidence to the reviewing officer to show why the decision should be changed.

CONTACT PERSON FOR MORE INFORMATION

For additional information or questions concerning this decision, or the appeal process, please contact the Sula District Ranger or Gina Owens, Recreation Forester, at (406) 821-3201.

Copies of the Spring Gulch Fishing Pier and Trail EA can be obtained at the Sula Ranger District in Sula, Montana, or the Bitterroot National Forest Supervisors Office in Hamilton, Montana.

2/19/93 Date

STEPHEN K. KELLY

Forest Supervisor

SPRING GULCH DISABLED FISHING PIER AND TRAIL

ENVIRONMENTAL ANALYSIS

1993

SULA RANGER DISTRICT
BITTERROOT NATIONAL FOREST



SPRING GULCH DISABLED FISHING PIER AND TRAIL

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I. PURPOSE AND NEED

Spring Gulch Campground is located approximately 17 miles south of Darby, MT and is sandwiched between Highway 93 and the East Fork of the Bitterroot River. It currently has 10 camp units and is heavily used during the summer months. Visitors to the campground are generally older and many have disabilities or benefit from facilities designed for accessibility. The district is in the process of expanding and upgrading the campground to be totally accessible to persons with disabilities. This will include the toilets, camping spurs, picnic tables, fire rings, and all other facilities.

One of the most popular activities in the campground is fishing because of good vehicle access and available parking areas. There are no developed fishing access points along the entire length of the East Fork River. Access to the river is achieved by use of several undeveloped access points along U.S. Highway 93 between Sula and Spring Gulch Campground. These sites are somewhat hazardous as they do not meet standards for safety, disabled person access or adequate parking and turnaround space.

A. Proposed Action

The district proposes to provide access to the river for persons with disabilities. The proposal includes construction of a fully accessible fishing pier and trail along the river to allow persons in wheelchairs or with other mobility impairment to have safe access to the river. The pier would measure 12 ft. X 30 ft. and provide access to some of the best pools in the area while the trail along the river would allow disabled persons to fish in several locations.

In addition to providing access to the river, the district proposes to improve the fisheries habitat by placing 20 to 30 large rocks and several logs in the river adjacent to the campground to scour and maintain resting pools as well as provide high water protection for fish.

B. Scope of the Proposed Action

All proposed developments will occur within the Spring Gulch Campground. The Campground is located approximately 17 miles south of Darby, just south of mile marker 16 on U.S. Highway 93 in the SE1/4 of T1N, R20W. All proposed developments will be constructed in the summer and fall of 1993 and 1994.

C. Previous Environmental Analysis which Influences this NEPA Analysis

The Sula Ranger District completed the analysis for upgrading the recreational facilities at four campgrounds (Spring Gulch, Indian Trees, Warm Springs, and Martin Creek Campgrounds) in June of 1992. This analysis was documented in a Decision Memo and analyzed the effects of upgrading campground facilities to meet current standards for disabled access and modern day recreational vehicles.

D. Scoping and Significant Issues

Scoping for this proposal was done by a news release in the Ravalli Republic on December 24, 1992. In addition, a letter was mailed to individuals on the Forest Plan mailing list describing the project and the need for a site specific Forest Plan amendment, and a presentation made to the Bitterroot Chapter of Trout Unlimited. Many comments were received by the public. Most of the

comments were in favor of the fishing pier and habitat improvements. The following issues were received from members of the public and Forest Service personnel.

- Issue 1: Is there a need for additional fishing access to the East Fork of the Bitterroot River?
- Issue 2: Would additional access put too much fishing pressure on the section of river adjacent to the Spring Gulch Campground?
- Issue 3: Would development of this site draw unwanted use such as day use to the campground?
- Issue 4: Would the site be accessible for persons with disabilities?
- Issue 5 Would construction of the fishing pier within the riparian area and Forest Plan management areas 3b and 10 be consistent with the Bitterroot National Forest Plan?
- Issue 6: What would be the effect on fisheries in the East Fork of the Bitterroot River?
- Issue 7: Would the construction of the fishing pier within the stream channel be precedent setting for future developments within river channels?

E. Response to the Issues

- There are no developed fishing access points along the entire section of the East Fork of the Bitterroot River. There are several undeveloped sites that do not meet standards for safety, disabled person access, or adequate parking and turnaround space; this demonstrates the need for a developed fishing access point to the river.
- Issue 2: Fishing use on the East Fork of the Bitterroot River is probably going to increase in future years regardless of whether developed fishing access points are constructed. The Forest Service cannot regulate fishing pressure on the East Fork River. Fishing regulations are the authority of the Montana Department of Fish, Wildlife, and Parks. This department is currently regulating fishing pressure through Montana State Fishing Regulations such as fishing seasons, bag limits, and catch and release regulations. The development of one site will not significantly increase fishing pressure on the East Fork River. The undeveloped sites will continue to receive use from those visitors who seek more solitude.
- Issue 3: Day use at the Spring Gulch Campground is quite prevalent and consists primarily of fishing and picnicing. It is used as a picnic ground by families traveling through the area; length of stay is usually an hour or two at the most. Individuals who use the area for fishing access generally park their cars and walk along the river through the campground. Most day use occurs in the early afternoon. The campground fills up around 6pm every evening so day use does not interfere with overnight visitors. Included in the plans for the campground upgrade is a small 3-4 car parking area for day use visitors.
- Issue 4: Alternative 3 provides river access to persons with disabilities. Both the fishing pier and the trail would meet design criteria for wheelchair access.
- Issue 5: The proposed action location is currently located in Forest Plan Management Areas 3b and 10 which provide management direction for recreational activities associated with lakes, streams, and developed recreation sites. Construction of the fishing pier in a riparian area would be inconsistent with Management Standard 0.3.a.(3), page III-69 of

the Bitterroot National Forest Plan. Alternative 3 would construct a fishing pier and a trail along the river to provide access for persons with disabilities. Currently there are no developed recreation sites on private or national forest land that provide good access to the river for disabled people. Discussion with Bob Bigler, Bitterroot National Forest Planning Staff Officer, and Chuck Troxel, Bitterroot National Forest Recreation Staff Officer, during the analysis for the West Fork Boat Launch Site (a similar project), revealed that there was no intent to prohibit development of boating or fishing access sites adjacent to rivers within National Forest Land. The intent of the standards identified above was to prohibit additional development of campgrounds in riparian areas. If Alternative 3 is selected, a site specific, non-significant amendment to the Forest Plan to allow construction of a fishing pier adjacent to the Spring Gulch Campground will have to be included with the decision.

- Issue 6: All action alternatives would improve habitat for fisheries by placement of rocks and logs in the river which would scour and maintain resting pools as well as provide high water protection.
- Issue 7: The development of the fishing pier is in no way precedent setting. The Bitterroot Forest Plan is very specific about how riparian areas and river channels are to be managed. An Environmental Analysis and a site specific Forest Plan amendment must be written each time a facility of this nature is considered. Additionally, permits from the Army Corp of Engineers and the State must be obtained. These permits serve to regulate what type of development will be acceptable within river channels and are reviewed on a case by case basis.

II. ALTERNATIVES

This chapter describes the alternatives (potential actions). The issues discussed in Chapter I were used to develop these alternatives which consist of: Alternative 1 - No Action; Alternative 2 - Fisheries Habitat Improvements; and Alternative 3 - Fishing Pier, Trail, and Fisheries Habitat Improvements.

Alternative 1: No Action - This alternative represents the existing condition. The campground will be upgraded to include accessible facilities such as toilets, tables, and fire rings. The road surface will be repayed and the camp units will be widened and lengthened to accommodate modern day recreational vehicles. No additional development would occur within the riparian area. The fishing pier and fisheries habitat improvements would not be constructed.

Alternative 2: Fisherles Habitat Improvements - This alternative would allow for the construction of the fisheries habitat improvements but the fishing pier and trail would not be built. Habitat improvements include placing approximately 20 to 30 large rocks in the river in 2 to 3 Rosgen vortex (rocks placed in the river in an elongated arc) arrangements which will scour and maintain resting pools, as well as provide high water protection for fish. Several logs may be added to some of these structures to increase instream cover.

Alternative 3: Fishing Pier and Fisheries Habitat Improvements - This alternative would allow for the construction of the habitat improvements, the fishing pier, and a trail along the river. Implementation would result in construction of a fully accessible fishing pier and trail along the river to allow persons in wheelchairs or with other mobility impairment to have safe access to the river. The pier will measure 12 ft. X 30 ft. and provide access to some of the best pools in the area while the trail along the river will allow disabled persons to fish in several locations. The trail will not run directly adjacent to the river, it will be located approximately 10 feet from the high water line and be approximately 800 feet in length. Habitat improvements would consist of those described in Alternative 2 (placement of 20-30 rocks and several logs in the river adjacent to the campground to scour and maintain resting pools as well as provide high water protection for fish).

III. AFFECTED ENVIRONMENT

This chapter describes the current condition of resources which may be affected by this proposal.

A. Fisheries

Rainbow trout and mountain whitefish are the most common gamefish in this section of the East Fork of the Bitterroot River. Brown trout, Westslope Cutthroat trout (sensitive), bull trout (sensitive) and brook trout also occur in this area. The East Fork can provide for all of the life stages of a resident trout, although some resident trout may move into tributaries for spawning, and other trout may migrate through the area. Being along US 93, and next to a campground, fishing pressure is at least moderate in this section.

This reach of the East Fork from the bridge upstream from the campground to about 500 feet downstream from the campground, is mostly a wide, flat, shallow riffle. There are few pools, and little glide or run habitat. During most of the year, stream depth is too shallow to provide cover for resident lish. There is an opportunity to increase cover and the trout population.

B. Recreation

The proposed fishing pier, trail, and fisheries habitat improvements would be constructed within Spring Gulch Campground along the East Fork of the Bitterroot River. Spring Gulch is a heavily used 10 unit campground with two toilets, several tables and fire rings, and a water system. The campground is nearly full during the summer months and many visitors are senior citizens who stay one or two nights and then move on toward their destination. Over the next 2-3 years, the campground is scheduled to be upgraded to meet accessibility standards and modern day recreational vehicle standards. This includes accessible toilets, picnic tables, water spigots, and fire rings. Camp units will be widened to accommodate larger recreational vehicles and wheelchairs.

C. Riparian Area

Spring Gulch Campground is located in and adjacent to the riparian area next to the East Fork of the Bitterroot River. Riparian vegetation consists primarily of willow shrubs and cottonwood trees. Most of the campground facilities, such as toilets, roads, picnic tables, and fire rings, are outside of the riparian area. High public use of the site has resulted in some degradation of riparian vegetation at high use river access points.

D. Cultural Resources

A preliminary cultural resources inventory was completed in the summer of 1992. After final project design and before implementation of the project, an additional archaeological survey will be considered and conducted if necessary. Consultation with the State Historic Preservation Office (SHPO) will be completed before project implementation.

E. Sensitive Plants

A sensitive plant survey was conducted in the summer of 1992 and no sensitive plants were located in the project area.

IV. ENVIRONMENTAL CONSEQUENCES

This chapter documents the potential consequences or effects of the three alternatives being considered. There would be no irreversible or irretrievable commitments of resources with implementation of any of the alternatives.

A. Alternative 1 - No Action

The existing situation would continue. The campground will be upgraded to include accessible facilities such as toilets, tables, and fire rings. The road surface will be repaved, and the camp units will be widened and lengthened to accommodate modern day recreational vehicles. No development would occur within the riparian area. The stream bank would continue to deteriorate in high use areas. Fisheries habitat would remain unchanged.

B. Alternative 2 - Fisheries Habitat Improvements

Fisherles:

Fish habitat would be improved by providing more yearlong cover for resident trout (see attached drawing). By providing more cover there should be an increase in the resident trout population. Project effectiveness will begin after the first bankfull discharge, but may take several years before maximum effectiveness is reached. Project life should be 20-30 years, with only periodic maintenance.

Additional fishing pressure on the East Fork will probably occur regardless of this project (Alt B or C). The successful completion of this project will probably increase fishing pressure on that section of the East Fork. The Montana Fish, Wildlife and Parks determines fishing regulations in the area, which can directly effect fish numbers and composition. These regulations change over time, and may have more influence over local fish populations than changes in fishing pressure, or changes in fish habitat from this project.

Recreation:

The campground upgrade will be implemented, which will provide accessible toilets, picnic tables, fire rings, and campsites, but will not include access to the river. Disabled access along the East Fork of the Bitterroot River will be non-existant. Access to the river will continue to occur in undeveloped sites which pose a safety hazard to highway users and visitors to the National Forest. When U.S. Highway 93 reconstruction through the Sula canyon occurs, there will be additional parking sites available for fishing access although these will not be specifically designed for disabled access.

Riparian Area:

Specific sites within the riparian area adjacent to the campground will continue to degrade due to high use at river access points. Existing riparian vegetation, such as willow shrubs and cottonwood trees would not be affected.

C. Alternative 3 - Fishing Pier, Trail, and Fisheries Habitat Improvements

Fisherles:

Fish habitat would be improved by providing more yearlong cover for resident trout. By providing more cover there should be an increase in the resident trout population. Project effectiveness will begin after the first bankfull discharge, but may take several years before maximum effectiveness is reached. Project life should be 20-30 years, with only periodic maintenance.

Additional fishing pressure on the East Fork will probably occur regardless of this project (Alt B or C). The successful completion of this project will probably increase fishing pressure on that section of the East Fork. The Montana Fish, Wildlife and Parks determines fishing regulations in the area, which can directly effect fish numbers and composition. These regulations change over time, and may have more influence over local fish populations than changes in fishing pressure, or changes in fish habitat from this project.

Recreation:

The campground upgrade will occur; this will provide accessible toilets, picnic tables, fire rings, and campsites. In addition, an accessible fishing pier and trail along the river will be constructed. This pier and trail will be the only developed fishing access point along the entire length of the East Fork River. When U.S. Highway 93 reconstruction through the Sula canyon occurs, there will be additional parking sites available for fishing access although these will not be specifically designed for disabled access.

Day use at the site may increase as visitors become aware of the facilities. If day use begins to conflict with overnight camping, a specific area for day use parking will be designated.

Riparian Area:

Small areas of willow shrubs will be removed along the proposed trail to allow access from the trail to the river's edge. Width of clearing may vary between 5-10 feet dependent upon the topography of the specific site. Small sites within the riparian area will be hardened to allow for disabled access. These sites will reduce overall degradation of the riparian area by focusing visitors into specific areas. The fishing pier will be constructed at a high use access point and will protect the stream bank from further deterioration.

D. Consistency with Forest Plan Standards

Implementation of Alternative 3, which allows for construction of a fishing pier and trail adjacent to the East Fork River, is inconsistent with Recreation Management Standard 0.3.a.(3), page III-69 of the Bitterroot National Forest Plan. Discussion with Bob Bigler, Bitterroot National Forest Planning Staff Officer, and Chuck Troxel, Bitterroot National Forest Recreation Staff Officer, during the analysis for the West Fork Boat Launch Site (a similar project), revealed that there was no intent to prohibit development of boating or fishing access sites adjacent to rivers within National Forest Land. The intent of the standards identified above was to prohibit additional development of campgrounds in riparian areas.

The Recreation Standard will also be changed to allow this site in the riparian area. Standard 0.3.a.(3), page III-69 will be changed from:

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (Near the West Fork Ranger Station in the SE1/4, section 19, T1N, R21W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impact.

to

- (3) No facilities will be built in riparian zones except for the following:
 - (a) A boat launch facility on the West Fork of the Bitterroot River (Near the West Fork Ranger Station in the SE1/4, Section 19, T1N, R21W, PMM); and
 - (b) An accessible fishing pier on the East Fork of the Bitterroot River (adjacent to Spring Guich Campground) in the SE1/4, Section 1, T1N, R20W, PMM).

Existing facilities will be rehabilitated to protect riparian zones from human impact.

This change in Forest Plan Standards would not significantly alter Forest Plan goals and objectives or the long-term relationship between levels of multiple-use goods and services. The changes would be minor and therefore a non-significant amendment to the Forest Plan. With the implementation of this non-significant amendment, Alternative 3 would be consistent with the Forest Plan.

V. LIST OF PREPARERS

Name

Dave Campbell

Gina Owens

Dale Hoth

Joy Bolton

Contributions

Review of Document

Writing, Editing Project Coordinator

Fisheries

Cultural Resources

VI. CONSULTATION WITH OTHERS

November 4, 1992 - Meeting to discuss feasibility of fisheries habitat improvements. Those present: Gina Owens - Recreation Forester and Gary Decker - Hydrologist.

November 18, 1992 - Scoping meeting with Montana Department of Fish, Wildlife, & Parks. Those present: Gina Owens - Recreation Forester and Chris Clancy - Fisheries Biologist, MT, Dept. of Fish, Wildlife, & Parks

January 7, 1993 - Scoping meeting with the Salish-Kootenai Tribe. Those present: Joy Bolton, Forest Archeologist, Kerry McMenus, Forest Planner, and Judith Fraser, Wilderness Coordinator.

January 13, 1993 - Scoping meeting with Bitterroot Chapter of Trout Unlimited. Those present: Gina Owens, Recreation Forester, and Dave Campbell, District Ranger.

USDA FOREST SERVICE BITTERROOT NATIONAL FOREST WEST FORK RANGER DISTRICT RAVALLI COUNTY MONTANA

DECISION NOTICE FINDING OF NO SIGNIFICANT IMPACT DETERMINATION OF NON-SIGNIFICANT FOREST PLAN AMENDMENT

FOREST PLAN AMENDMENT 11 BUCK-LITTLE BOULDER PROJECT - UNITS 9 AND 10

THE DECISION

It is my decision to amend on a site specific basis the Bitterroot Forest Plan's Management Area 1 Standards, as found in Chapter III-5, 3.e. The amendment will add the following standard:

(9) Lands unsuitable for timber management will not be scheduled for timber harvest except for salvage sales, sales necessary to protect other multiple use values, or activities that meet other objectives on such lands if the Forest Plan establishes that such actions are appropriate. (NMFA 36 CFR 219.27(C)(1)). The Forest Plan establishes that such actions are appropriate for Units 9 and 10 of the Buck Little Boulder Project located within the proximity of Sections 19 and 20, T1S, and R20W on the West Fork Ranger District.

The amendment will allow an individual tree selection improvement cut by helicopter harvest on Unit Numbers 9 and 10 of the Buck-Little Boulder Timber Sale. In making this decision I incorporate the environmental analysis and the accompanying documentation in the Final Environmental Impact Statement for the Buck-Little Boulder Timber Sale (August 13, 1993).

RATIONALE FOR THE DECISION

In meeting the purpose and need for action developed in the Buck Little Boulder Final Environmental Impact Statement, the selected alternative will help satisfy the demand for timber, contribute to the local and national economy, help maintain and create healthy stands of timber while increasing the natural diversity of the area. This activity will occur in proposed harvest units that have a mix of suitable areas interspersed in lands categorized by the Bitterroot Forest Plan and designated by project level planning as unsuitable for timber management.

These activities will occur in Management Area 1, which has Forest Plan direction stating that unsuitable lands will not be scheduled for timber harvest, except for salvage harvesting that is needed to meet management area goals and standards (Forest Plan, pg. III-5). This guidance in the Forest Plan was predicated on the assumption that scheduled timber harvest silvicultural prescriptions would be for even-aged management and that approximately 70 percent of that harvest would occur through clearcutting. These unsuitable lands are tree covered, but due to rockiness and soil productivity conditions (difficult to successfully plant) would not meet the criteria for even-aged management restocking, as required under 36 CFR 219.27. Additionally

lack of roaded access to these units makes intensive timber production uneconomical on the portions of them that would otherwise be suitable.

The current Forest Plan standard provides for salvage of dead and dying trees but it does not provide for improvement cutting in these unsuitable areas through individual tree selection followed by prescribed fire. An improvement cut will be implemented since it not only provides for the opportunity to salvage dead and dying trees, but it also permits the removal of competing overstories, diseased trees, and commercial thinning. The improvement cut combined with underburning best meets the management area objectives by increasing forage production, harvesting a limited amount of green trees and improves the chances of establishing and maintaining ponderosa pine as a component of the stand. Without treatment, the combination of successful fire suppression and natural succession will result in stands dominated by Douglas fir and the associated insects and diseases. Helicopter yarding followed by underburning is designed to insure that soil and water resources will be protected.

This decision is premised on the finding that the treatments are 'necessary to protect other multiple use values or activities that meet other objectives...on such lands' (not suitable for timber production)....* (36 CFR 219.27(c)(1)).

Timber production, as defined in the NFMA regulations and the Forest Plan, is not proposed to occur in units 9 and 10. The need to address vegetation species composition and stand structures in the ponderosa pine/Douglas-fir forest type, conditions resulting from decades of fire suppression, has been established for the lands occurring in units 9 and 10. The prescribed treatments were designed to address those needs. Those treatments fall in the category provided in the NFMA regulations which would allow for "sales necessary to protect other multiple use values, or activities that meet other objectives on such lands..." This Forest Plan amendment recognizes that such an action is appropriate in this area and should be allowed by the Forest Plan.

The option to modify the proposal to make it consistent with the Forest Plan, only salvage harvest, is addressed in the silvicultural diagnosis for stands 9 and 10 (BLB FEIS Appendix F). That option would not fully meet the stated management objectives or target stand conditions. Therefore, the proposed treatments were not modified for the sake of Forest Plan consistency.

Rejection of the proposal to treat units 9 and 10 was considered as part of four alternatives considered in the BLB Environmental Impact Statement and In Alternative A of the Forest Plan Amendment 11 EA. The purpose and need for action was established for the prescribed treatment, The consequences of not implementing the prescribed treatments have been described and have some adverse effects. The option to reject the proposal was considered in the decision at hand, but that option would not address the shift in species composition and stand structure that has occurred in units 9 and 10.

The prescribed timber harvest will reduce stand density and competition between trees and also reduce the threat of a "fuel ladder" from Douglas-fir trees that have grown to commercial size. The absence of periodic ground fires that were common historically has allowed the more shade tolerant Douglas fir trees to become established and grow. Following the improvement cut, prescribed understory burning will be carried out. The prescribed timber harvest and understory burning will achieve the target stand conditions; an open and more park-like stand with a higher component of ponderosa pine and a multi-storied structure. The treatments will also create conditions more favorable for the natural establishment of ponderosa pine; the tree species which dominated these sites prior to the period of modern fire suppression. The target stand will meet Management Area objectives by providing forage for big game and a higher proportion of ponderosa pine for wildlife species that prefer this tree species.

ALTERNATIVES CONSIDERED

The environmental analysis for Forest Plan Amendment 11 focused on a specific request by the West Fork District Ranger to amend the Forest Plan to allow timber harvest on unsuitable lands in Units 9 and 10 of the Buck-Little Boulder Project. The Environmental Assessment for Amendment 11 identifies two alternatives: Alternative A - No Action, and Alternative B - The Proposed Action.

The activities in Alternative B were initially developed as one of seven action alternatives (Alternative 5) in the Buck-Little Boulder Environmental Impact Statement (BLB EIS). The West Fork District Ranger selected Alternative 5 in the Record of Decision for the BLB EIS and requested a site-specific Forest Plan amendment to allow timber harvest on unsuitable lands for resource values other than timber production.

The Buck-Little Boulder EIS identified and evaluated eight alternatives. In addition, alternative silvicultural treatments for each unit (stand) were considered in the silvicultural diagnosis.

The alternatives are further discussed in the Amendment 11 Environmental Assessment and in the Buck-Little Boulder EIS and ROD. Other alternative treatment methods and approaches were not studied in detail and are discussed in Appendix A of the EA.

PUBLIC INVOLVEMENT

Public Involvement for Forest Plan Amendment

The need to amend the Forest Plan to implement the proposed activities was identified in the Record of Decision for the Buck-Little Boulder EIS on August 13,1993 by the West Fork District Ranger. On August 30, 1993, the Bitterroot Forest Supervisor signed a Decision Notice to amend the Forest Plan on a site-specific basis and to implement an improvement cut by helicopter harvest on Units 9 and 10 of the Buck-Little Boulder Project. The decision to amend the Forest Plan was appealed. On February 18, 1994, after administrative review of the Forest Supervisor's Decision, the decision was reversed to the Forest because the public was not adequately notified of the amendment earlier in the project planning process.

The Forest decided to pursue the amendment and on April 12, 1994, a Legal Notice was published in the Ravalli Republic newspaper in Hamilton. Montana, announcing that the Forest Supervisor proposed to amend the Bitterroot Forest Plan to allow timber harvesting activities for other multiple use values on unsuitable lands in Units 9 and 10 of the Buck-Little Boulder Project. Letters concerning this proposal were also sent to over 300 people who had commented on the BLB Draft EIS. The proposed amendment also appeared in the Forest's quarterly schedule of projects which is distributed to several hundred people and organizations.

Ten written responses were received during the comment period for the EA and the during the proposed action's scoping period. Several people discussed the proposed activities with the West Fork District Ranger. The issue of harvesting timber on unsuitable lands was also discussed at a meeting between local Conservation Group members and the Forest's Five-year Review Team.

The Environmental Assessment for Amendment 11, the proposed Finding of No Significant Impact, and the proposed Determination of Non-Significance for the Site-Specific Forest Plan Amendment, were mailed to all people who had provided comments during the scoping period and to everyone on the Forest's Forest Plan mailing list. Five letters were received during the 30 day EA comment period.

Comments received during the scoping period and the 30 day EA comment period are included in Appendix A. The comments were considered in the decision making process and are responded to in this Decision Notice and in Appendix A.

Public Involvement for the Buck-Little Boulder EIS

Public involvement for the Buck-Little Boulder Project began in the fall of 1987, after the initial notice and request for comment were provided to the public. Nearly 200 comments, issues, and concerns were received in late 1987 and early 1988. More than 30 of the comments were written and the rest were verbal. A field trip was held on September 28, 1989. A public meeting was held on April 12, 1990. On May 21, 1991, an open house was held at the Ravalli County Courthouse. Another open house, for this and other project proposals on the West Fork District, was held on December 13, 1991, at the Bitterroot National Forest Supervisor's Office.

At the request of a local citizens' group, Friends of the Bitterroot (FOB), the West Fork District met with the FOB Steering Committee on March 12, 1992, to present project work for fiscal year 1992. District personnel presented the Buck-Little Boulder analysis, including the proposed action and the other alternatives. From that meeting, another was scheduled and completed with FOB on April 8, 1992.

The Notice of Intent of the Buck-Little Boulder Draft EIS was published in the Federal Register on March 12, 1993. Comments received on the Draft EIS were due on April 26, 1993. A Notice of Availability also appeared in the legal notices of the Ravalli Republic newspaper, Hamilton, Montana, on March 8, 1993. Short news articles appeared in the Ravalli Republic and the Missoulian newspaper, Missoula, Montana, on March 10, 1993.

Copies of the Draft EIS were mailed to over 160 individuals, agencies, and organizations on February 26, 1993. Additional copies were mailed to individuals requesting a copy as a result of newspaper articles and notices. The Draft EIS was available at the Bitterroot National Forest Headquarters and the West Fork Ranger District offices. The District Ranger met with several interested individuals between the Draft and Final EIS.

Fifty-one responses to the Draft EIS were received. A list of the respondents, comments, and responses to comments are in Chapter V of the Buck-Little Boulder Final EIS. The comments were reviewed by the Buck-Little Boulder Interdisciplinary Team and the District Ranger. As a result of the comments, a new alternative was developed and other changes were incorporated into the Final EIS.

The Record of Decision for the Buck-Little Boulder EIS was signed on August 13, 1993 by the West Fork Ranger District. The decision was appealed and, after administrative review, upheld by the Bitterroot Forest Supervisor and the Regional Office.

COMPLIANCE WITH THE NATIONAL FOREST MANAGEMENT ACT

This decision will be implemented in compliance with the Forest Plan for the Bitterroot National Forest. The National Forest Management Act and accompanying regulations require that several specific findings be documented at the project level. These findings are as follows:

A. FOREST PLAN CONSISTENCY

The selected alternative is consistent with the Forest Plan standards, goals and objectives, as amended

B. SUITABILITY FOR TIMBER PRODUCTION

As discussed in the rationale for my decision, Units 9 and 10 have a mix of suitable areas interspersed will areas of land categorized as unsuitable for timber production that will be treated under the selected alternative. My decision to allow the prescribed treatments to proceed will not change the determination that these lands are unsuitable for timber production. The treatments prescribed are not those which would be prescribed if timber production were the objective on these sites. Managing for timber production would into a practices designed to maximize timber growth and yield; even-aged regeneration harvest, reforestation.

ensuing cultural treatments such as release from competing vegetation and precommercial thinning. The prescribed treatments are designed for the benefit of native wildlife; to maintain and restore ponderosa pine and to increase forage. One of the primary purposes for identifying lands that are unsuitable for timber production is to ensure that lands can be restocked with in 5 years after final harvest (CFR 36 219.27(c)(3). The actions proposed in this decision are improvement cuts, not final harvest cuts. The implementation of the improvement cuts will not result in the lands being unstocked or needing to be planted.

C. CLEARCUTTING AND EVEN-AGED MANAGEMENT

When timber is to be harvested using even-aged management system, a determination that the system is appropriate to meet the objectives and requirements of the Forest Plan must be made, and where clearcutting is to be used, it must be determined to be the optimum harvest method (16 USC 1504(g)(3)(F)(I).

Even-aged management, including clearcutting is not proposed for Units 9 and 10.

D. VEGETATIVE MANIPULATION

All proposals that involve vegetative manipulation of tree cover for any purpose must comply with the seven requirements found in 36 CFR 219.27(b).

(1) Management prescriptions shall be best suited to the multiple-use goals established for the area with impacts considered in the determination.

An improvement cut, yarded by helicopter, followed by prescribed fire is the best suited treatment to accomplish the purpose and need as documented in the Buck-Little Boulder Environmental Impact Statement

(2) Management prescriptions shall ensure that the lands can be adequately restocked as provided in 36 CFR219.27(c)(3)*...assure that technology and knowledge exist to adequately restock the lands within 5 years after final harvest* (16 USC 1604(g)(3)(E)(ii).

The management prescription for the lands affected by this decision are designed to leave the stands stocked. Regeneration harvest is not planned. The introduction of fire will provide an increase in forest health. Biological diversity will be enhanced as outlined in item 6 below.

(3) Management prescriptions shall not be chosen primarily, because they will give the greatest dollar return or the greatest output of timber.

The proposed management activities do not have the highest economic value or the largest timber volume. This alternative was chosen based on its ability to meet the goals, objectives and standards of the Forest Plan and be responsive to site specific issues and denied conditions.

(4) Management prescriptions shall consider the effects on residual trees and adjacent stands.

The silvicultural prescriptions for Stands 9 and 10 prescribe the site-specific details for vegetative treatments and schedules that are to be implemented to protect the residual trees and surrounding stands. The overall forest health will be improved and residual trees and surrounding stands will be protected from losses to insect or disease epidemics and stand replacing fires. Those disturbances would result in much more dramatic and adverse effects than the treatments proposed.

(5) Management prescriptions shall avoid permanent impairment of site productivity and ensure conservation of soil and water resources.

The effects of the selected alternative activities and practices and mitigation measures are disclosed in Chapters II and IV of the Buck-Little Boulder Environmental Impact Statement. The activities proposed in conjunction with the soil and water conservation practices planned will avoid impairment of site productivity and ensure conservation of soil and water resources. Helicopter yarding followed by underburning provides for nutrient recycling while ensuring conservation of soil and water resources.

(6) Management prescriptions shall provide the desired effect on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation use and aesthetic values.

The desired effects are identified in the standards for Forest Plan Management Area 1 as amended. The selected alternative will enhance the development of a diverse vegetative community, reserve trees for vertical diversity, snags, woody debris recruitment, wildlife habit, and shade for natural regeneration. The silvicultural activities to be implemented will have the desired effect on the water, wildlife, fish, recreation, and aesthetic resources,

(7) Management prescriptions shall be practical in terms of transportation and harvesting requirements, and total cost of preparation, logging and administration.

The BLB Environmental Impact Statement discloses on pg. IV-56 "The estimated stumpage values for each alternative indicate that with the current strong market conditions, brought on in part by high finished product values and limited supplies of stumpage, each alternative would be a viable timber sale offering." Current and past experience indicates that the prescribed silvicultural prescriptions and other activities proposed are practical to accomplish.

FINDING OF NO SIGNIFICANT IMPACT

The direct, indirect, and cumulative impacts of the management activities on Units 9 and 10 have been reviewed as documented in the Environmental Assessment for Forest Plan Amendment 11. The FEIS, ROD and Project File for the Buck-Little Boulder Project are also fully incorporated by reference. Consideration of the proposed action and the amendment is based on their impacts on the ecosystem, local communities county, and at the project level. They do not have any large or lasting effect on society as a whole, the Nation, or the State.

Based on this review, I have determined that there are no significant impacts on the physical, biological, or social portions of the human environment. Implementation of management activities after adoption of the site-specific Forest Plan Amendment will be consistent with the management direction, standards and guidelines outlined in the 1987 Bitterroot Forest Plan,

The determination of no significant impact (for implementation of management activities on units 9 and 10) is based upon criteria found at 1508.27. National Environmental Policy Act. The following factors were used to determine significance:

Significant impacts that may be both beneficial and adverse:

Impacts associated with the management activities are discussed in the Environmental Assessment for Amendment 11 and in Chapter IV of the BLB FEIS. These impacts are within the range of those considered acceptable in the Forest Plan. The actions would not have significant impacts on other resources identified and described in Chapters II and III of the BLB FEIS.

The degree to which the management activities affects public health or safety:

Significant issues regarding public health and safety were not raised by members of the public. Nevertheless, logging truck traffic on roads, dust, smoke pollution in the Bitterroot Valley, and the risk of escaped prescribed fire have been analyzed and the effects disclosed in the BLB FEIS.

It is my determination that the management activities will have no significant effects on public health and safety.

Unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farms, wet lands, wild and scenic rivers or ecologically critical area:

Timber harvesting and prescribed fire will occur in the Allan Mountain Roadless Area. The lands are located in MA-1 which allows timber harvest. An improvement cut, followed by an underburn is planned for Units 9 and 10 to maintain and enhance these ponderosa pine stands. The trees will be removed by helicopter. Because of the type of harvest and the lack of road construction, no acres will be removed from the Roadless Area inventory. Evidence of human activity in the 92 acres of improvement cuts will be minimal. In the short term, sights and sounds of human activity will affect opportunities for solitude and remoteness in the Little Boulder Creek drainage. There will be no long-term effects on remoteness and solitude.

The Allan Mountain Roadless Area will remain in essentially the same condition. The roadless/wilderness characteristics that may cause Congress to designate the Allan Mountain Roadless Area as Wilderness will not change as a result of this proposal.

The project area does not contain, nor is it in the immediate proximity to, unique historical or cultural resources, prime farmlands, wetlands, or ecologically critical areas.

Based on these factors, I have concluded that the management activities will have no significant effects on unique resources or characteristics.

The degree to which the effects on the quality of the human environment are likely to be highly controversial:

The effects of this action on the quality of the human environment are not highly controversial. Past monitoring has determined that actual effects of similar projects are consistent with estimated effects of the proposed activities. The Environmental Assessment for Amendment 11 and the BLB FEIS disclose the effects of these activities.

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risk:

The management activities are low impact, have previously been experienced, and do not involve unknown risk. Underburning is consistent with historical natural processes. Caution, in the form of mitigation measures, page II-12, BLB FEIS, is taken to lower the risk of escaped fire.

It is my conclusion that there are no unique or unusual characteristics of the area which have not been previously encountered, that would constitute an unknown risk upon the human environment.

The degree to which the action may establish a precedent for future actions with significant effects or presents a decision in principle about future consideration:

The management activities are not setting a precedent for future actions with significant effects. The areas that will be harvested under this site-specific Forest Plan amendment are suitable for the management practices that will be implemented. If similar activities are to be implemented on similar lands in other geographic areas of the forest, further analysis and further site-specific Forest Plan amendments would be required.

I find these management activities are not precedent setting and do not present a decision in principle about future management activities on other areas.

Whether the action is related to other actions with individual insignificant but cumulatively significant impacts:

The combined effects of past, other present, and reasonably foreseeable actions are disclosed in Chapters III and IV, BLB FEIS. I find there is no indication of significant adverse cumulative effects to the environment.

The degree to which the management activities may adversely affect Districts, sites, highway structures, or objects listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources:

There are no features in the area that are listed or are being considered for listing on the National Register of Historic Places. A cultural resource inventory has been completed in the area, and all known cultural resources are protected, pg III-28, BLB FEIS.

The degree to which the management activities may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973:

I conclude that the management activities would not likely affect any sensitive or candidate fish, wildlife or plant species which may occur in the area. Biological evaluations were prepared for threatened, endangered and sensitive wildlife and fish species. The U.S. Fish and Wildlife Service (USFWS) reviewed the Biological Evaluations and concurred with the Forest Service determination that the management activity is "not likely to adversely affect" the endangered peregrine falcon, bald eagle, gray wolf or the threatened grizzly bear. The USFWS's concurrence with the determination that this proposed project will not be likely to affect peregrine falcons is contingent upon the full implementation of all mitigation and monitoring measures indicated in the Biological Evaluations.

Sensitive plant surveys were conducted in the Buck-Little Boulder analysis area. While plants were not found in Units 9 and 10 they were found in the project area. Biological evaluations were prepared for sensitive plant species, including hollyleaf clover, Rocky Mountain paintbrush, Idaho goldenweed, northern golden carpet and candystick, With implementation of the mitigation measures described in Chapter II, BLB FEIS, species viability would be maintained.

Whether the management activity threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment:

The activity meets Federal, State, and local laws for air and water quality, streamside management, riparian areas, cultural resources, and Threatened and Endangered species, and meets National Environmental Policy Act disclosure requirements.

Based on these considerations, I conclude that the proposed management activities will not have a significant impact on the human environment and that an environmental impact statement is not required.

DETERMINATION OF NON-SIGNIFICANCE FOR THE SITE-SPECIFIC FOREST PLAN AMENDMENT

Based on my review of the following factors. I have determined that the Proposed Action (Site Specific Amendment to the Forest Plan) is not a significant change in the Forest Plan. The determination that the Proposed Action (Site Specific Amendment to the Forest Plan) is not significant has been made in accordance the requirements of 16 U.S.C. 1604 (f)(4), 36 CFR 219.10 (f) and FSM 1922.5, National Forest Management Act.

The following factors were used to determine whether the proposed change to the Forest Plan is or is not a significant change:

Timing of the Proposed Action:

The Proposed Action (Site Specific Amendment) will become effective following appropriate public notification and completion of procedures for administrative review of the decision. The management activity that will occur as the result of this amendment is planned for the fall of 1994 or during 1995.

The timing of the proposed action is compatible with the treatment of other lands in the Buck-Little Boulder area, which were all analyzed in detail in the Buck Little Boulder ElS. This amendment is not significant in terms of the timing of overall changes in the Forest Plan. Revision or changes to the Forest Plan are anticipated to proceed over the next several years. This amendment is not significant or incompatible with those efforts at the Forest Plan level. This amendment does not change the management area allocation or the suitable land base. It allows for ecosystem restoration for these two units.

Location and Size:

The Proposed Action (Site Specific Amendment) affects approximately 92 acres of a mixture of suitable and unsuitable acres in the Buck Little Boulder project area.

Specifically, it affects an estimated 60 acres of unsultable lands interspersed within a larger block of suitable lands at the project scale.

For Management Area 1, it will affect approximately 60 acres of approximately 31,000 acres of unsuitable land in MA-1.

At the Forest Plan scale it will affect approximately 60 acres of 94,000 acres of unsuitable lands,

Goals, Objectives and Outputs:

Because of the very small amount of land affected upon implementation of management active is permitted by the Proposed Action, no discernible changes in the levels of goods and ser, a projected by the Forest Plan will occur.

As disclosed in the Environmental Assessment, the Proposed Action will assist in meeting Bittern Forest Plan Goals and Objectives.

Management Prescription:

The Proposed Action (Forest Plan Amendment) is site specific to Units 9 and 10 in the Buc-Boulder Project Area (See Map Attached to Environmental Assessment). It does not apply to decisions. The Proposed Action does not change the Desired Future Condition of the Forest anticipated goods and services to be produced as described in Chapter II of the Forest Plan

Based on these determinations, I conclude that the Proposed Action (Alternative B) is of minor conservation when considered in the context of the Forest Plan and does not constitute a significant change

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

This decision conforms to the National Environmental Policy Act, 1969 (NEPA): the Council of Environmental Quality Implementing Regulations, (40 CFR 1500-1508); The Multiple Use, Sustained Yield act, 1960: and the National Forest Management Act, 1976.

COMPATIBILITY WITH OTHER AGENCY GOALS

Comments received from other public agencies about the BLB project include the Montana Department of Fish, Wildlife, and Parks and the U.S Environmental intection Agency. The USDI Fish and Wildlife Service was consulted in the decision-making process. The proposed action and the associated Forest Plan non-significant amendment are compatible with the goals of these agencies.

IMPLEMENTATION DATE OF MY DECISION

If no appeal is received, implementation of this decision may occur on, but not before, five business days from the close of the appeal filing period. If an appeal is received, implementation may not occur for 15 days following the date of appeal disposition.

APPEAL RIGHTS

This decision is subject to appeal pursuant to 36 CFR Part 215.7. Appeals must be postmarked or received within 45 days after publication of the legal notice in the Ravalli Republic newspaper, Hamilton, Montana. The notice of appeal must be fully consistent with 36 CFR 215.14. Send appeals to

USDA, Forest Service, Northern Region Appeals Deciding Officer P.O. Box 7669 Missoula, Montana 59807

CONTACT PERSON FOR MORE INFORMATION

For additional information or questions concerning the decision or the appeal process, please contact Noral Rasure, West Fork District Ranger at (406) 821-3269 or Kerry McMenus, Forest Planning Staff Officer at 14-61 363-7106.

Copies of the Environmental Assessment for Amendment 11 and the Buck-Little Boulder Environment all Impact Statement can be obtained at the West Fork Ranger Station, Darby, Montana or at the Environment and Environment all Supervisor's Office in Hamilton, Montana,

STEPHEN K. KELLY

Forest Supervisor

6/25/9C

APPENDIX A - COMMENTS AND RESPONSES

Ten written responses were received during the scoping period and 30 day comment period for the Amendment 11 Environmental Assessment. The comments are transcribed below. Following the comments is a consolidated response. The Decision Notice, Finding of No Significant Impact, and the Determination of Non-Significance for the Site Specific Forest Plan Amendment also respond to the comments.

COMMENT ID: 1

DATE RECEIVED: June 14, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed, Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

Tom Platt

ADDRESS;

Alliance for the Wild Rockies

Box 8731

Missoula, MT 59807

NUMBER OF SIGNATURES: T

COMMENTS:

Comment: Site specific plan amendments circumvent the forest planning process: The Alliance for the Wild Rockies is opposed to any site specific forest plan amendments that precede the impending forest plan revision process. Congress mandated a specific procedure in the National Forest Management Act, that requires the Forest Service to assess land suitability through in-depth biological analysis and public involvement during the NEPA process. Through this public process, the Bitterroot National Forest determined that areas of the forest were unsuitable for timber harvest because of steepness of slope, erodable soils, etc. The lands in units 9 and 10 of the BLB project were determined to be unsuitable for biologically-based reasons.

AWR feels it is a violation of the forest planning process to attempt to reclassify lands in a piecemeal fashion that avoids the detailed method prescribed by the NFMA. The BNF must follow the requirements of NEPA and NFMA if it is to legally proceed with timber cutting activity on public lands. We request that the BNF refrain from any lorest plan amendments prior to the impending LRMP revision process. In the case of the BLB amendments, the BNF should withdraw the proposed EA and delete units 9 and 10 from the BLB timber saie.

Environmental Impact Statement Required to assess cumulative impacts: The reclassification of unsuitable lands on a case by case basis second guesses the biological and legal determinations of the forest planning process. It fails to consider the potential cumulative effects of additional suitability revisions on the land classification system. Additional reclassifications are reasonably foreseeable actions and thus fall under the cumulative effects requirements of NEPA analysis. Reclassification through the amendment process may occur forest-wide, and presents an opportunity for managers to achieve ASQ through numerous small actions which escape the larger review process. Thus, the potential impacts of reclassifying unsuitable sale units 9 and 10 transcend the local level of the BLB project. These cumulative impacts to soils, vegetation, and watersneds constitute a significant impact to the human environment and require a full EIS under the terms of the NEPA.

Response: See Consolidated Response to Comments following public comments.

The National Forest Management Act allows for non-significant Forest Plan amendments to be made by Forest Supervisors. This amendment does not reclassify unsuitable lands to suitable lands. It allows for timber harvest on unsuitable lands to protect other resource values as allowed for in the National Forest Management Act.

Because of the above, if the BNF proceeds with this proposal AWR requests that the forest withdraw its EA and prepare a full EIS on the potential effects of land suitability reclassification on forest resources. This EIS will differ from the BLB FEIS, in that it should address the specific question of the potential impact on rotest resources from altering the directives of the forest planning process. In addition, the EIS should contain an additional alternative beyond the no action and proposed action alternatives from the EA. The EIS also a

contain an alternative that considers deleting from the BLB project the portions of units 9 and 10 that are in unsuitable lands. The NEPA requires that planning documents present a full range of reasonable alternatives for each project. The current EA fails to do this and is thus inadequate. The modification of land classification is not essential for the BLB project to proceed. There are currently four alternatives on the BLB FEIS that do not require any forest plan amendment.(alternatives 1,4,7,and 8).

Response: Eight alternatives were considered in the Buck-Little Boulder Environmental Impact Statement. The selected alternative is the one that was brought forward into this analysis as the alternative that best met the purpose and need of the project. The Amendment 11 Environmental Assessment and Decision Notice also discuss alternatives.

Determination of no significant impact flawed: The process of suitability reclassification is a federal action that has far reaching effects beyond the local impacts to the BLB project, and thus are not within scope of an EA. Our point by point critique of the EA's determination of no significance follows:

- (1) BLB units 9 and 10 contain unique characteristics with ecological importance. All roadless lands qualify as unique areas of the National Forest System, and thus must be given a higher level of scrutiny when development activities are proposed for them. The Allan Mountain area is also proposed for Wilderness designation under the Northern Rockies Ecosystem Protection Act, a bill currently before Congress, This Congressional consideration for Wilderness designation confers additional uniqueness value to the area. Additionally, the Allan Mountain roadless area serves as a biological corridor connecting the Centennial Mountains and the Greater Yellowstone ecosystem with the Central Idaho Wilderness complex. A growing body of scientific evidence indicates that biological connectivity is essential for preserving genetic diversity in animal and plan populations. A recent court decision, Marble Mountain Audubon v. Rice(No. 90-15389, D.C. NO.CV89-170-EJG,Sept. 13, 1990), interprets NEPA to require the Forest Service to consider biological corridors. The standard for such a review is the same "hard look" NEPA requires of other environmental effects. We are requesting that the Forest Service analyze the effects of each of the alternative on possible biological corridors in the project areas, including species-specific assessments of corridor location and use. (2) The proposed forest plan amendment is highly controversial in its potential to affect the human environment. Recent polls indicate that over 30% of Montanans support all remaining roadless National Forest System land being protected as Wilderness. This would include the lands proposed for suitability reclassification in this proposal. This indicates that the decision to reclassify the lands is a controversial decision.
- (3) The action proposed will have highly uncertain effects, in that the long-term consequences of habitat fragmentation are unknown and involve great potential risk to normally functioning ecosystems. Additionally, the reclassification of unsuitable lands is not a common practice and is site specific in its potential to harm the watersheds in the project area.
- (4) Perhaps most important, the decision to reclassify biologically unsuitable land as suitable in order to harvest timber from it will set a far reaching precedent for other forest throughout the System. This element alone is a critical reason for only considering land suitability classification as part of the official forest planning process, or else in the larger context of a full EIS that evaluates the wider potential effects of piecemeal land reclassification.
- (5) The action is related to other actions with potentially cumulative effects, in three principal ways. First, the attempt to reclassify land opens the door to second-guessing forest plan direction and circumvention of the NFMA and NEPA processes. Second, the cumulative effects form the BLB project reduce the already diminished acreage of roadless lands in the National Forest System and thus have a deleterious effect on the biological diversity of system lands. Third, the fragmentation of biological corridors is an additional impact on threatened, endangered, and sensitive species in the region, especially when the two other factors (unsuitability for timber harvest and roadlessness) is considered.

Response: These concerns are addressed in the Finding of No Significant Impact and other supporting documents.

In closing, AWR feels that the proposal to reclassify lands designated as unsuitable for timber harvest through site specific forest plan amendment is an action of much larger significance than for just this project. We are concerned that reclassification of lands circumvents the forest planning process and should only be undertaken during formal forest plan review. If the agency insists on forest plan amendments, AWR requests that a full EIS be prepared that evaluates the possible cumulative effects of land suitability redesignation forest system-wide.

Reponse: See the Forest Plan Amendment 11 Determination of Non-Significant Amendment.

COMMENT ID: 2

DATE RECEIVED: April 15, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

Friends of the Bitterroot, Inc.

ADDRESS:

PO Box 442

Hamilton, MT 59840

NUMBER OF SIGNATURES: 1

COMMENTS:

FOB appreciates the opportunity to comment on the scoping for the environmental analysis to amend the 1987 Bitter Root Forest Plan to allow for cutting of timber on the intermingled "unsuitable" lands contained in the BLB area, as was originally proposed in the BLB FEIS/ROD.

The lands involved have been described as being in Forest Plan (LRMP) Management areas (MA) 1. Specifically, this analysis and amendment involves proposed commercial selective helicopter timber logging on unsuitable acres contained in Cutting Units 9 and 10 on slopes above Little Boulder Creek.

The "site-specific" amendment is to allow an "Improvement Cut" and introduction of fire to restore vegetative structure and ecological processes. This will supposedly result in "more open and park-like stands of trees with a greater proportion of large ponderosa pine, while increasing diversity in the area".

This action was first disclosed in the FEIS/Rod as * Amendment 13*, and was administratively appealed by this organization. The Regional Forester upheld portions of the appeal and remanded the decision back to yourself on February 18,1994.

The RO appeal decision stated in part:

"At a minimum, a LRMP amendment may be adopted only after appropriate public notification and satisfactory completion of NEPA procedures'.... If a LRMP amendment is necessary to implement a project, that fact must be disclosed early in the process so the public has an opportunity to identify issues associated with this aspect of the proposal, and so that its effects may be considered. I find that the [ROD for the BLB Timber Sale] was the first clear notice given to the public that a change was being proposed in the standard for harvest on unsuitable lands in this area. Comments on the proposed amendment were never solicited. This approach does not meet NFMA or NEPA requirements'

Relief was granted for issue(s) *# 1, 3 and 4, to the extent they relate to unsuitable lands in the [BLB] timber sale area*, which was defined previously in the decision as:

(1) remand the amendment, (3) that the forest supervisor should be required to follow the existing standards and guidelines of the existing Bitterroot LRMP, and (4) that the issue of timber harvest on unsuitable lands be addressed solely in the BLB Environmental Impact Statement or that all harvest on unsuitable lands be deleted from the BLB. (emphasis added)

We maintain this current process fails to comply with the RO decision regarding (3), and (4) above, and instead attempts to 'redefine' that decision.

Response: The Regional Reviewing Officer stated in his decision "Until proper procedures are followed, the Forest Supervisor must comply with existing direction...." The Forest is pursuing the amendment again and has responded to the issues identified by the Regional Reviewing Officer.

If this 'new' process is intended as a "supplement" of some kind to the BLB EIS/ROD, then it must be clearly disclosed as such and the rationale for the supplementation must be clearly defined.

It certainly does not involve NEPA/CEQ requirements for supplementation involving "substantial chance of the proposed action that are relevant to environmental concerns"; or "significant new circumstant information relevant to environmental concerns and bearing on the proposed or its impacts"

Conversely, if it is, (as described in the 'scoping' letter), an EA for an amendment to the LRMP, then what is being proposed is simply 'an after-the-fact' NEPA analysis being done only to justify a de-facto decision already made as described in the BLB FEIS/ROD.

This is not any different in principle that the 'decision' made by yourself on August 30, 1993 which was remanded back to you be the Regional Forester five and one-half months later, (on 2/18/94).

NEPA is enforced under the federal court's authority to set aside agency action taken without observance of the procedures required by law. Save the Yaak Committee v. Block, 840 F.2d at 717 (9th Cir. 1988) cert. denied, _____U.S.____, 109 S.Ct. 1340 (1989).

Proper timing of environmental review is essential to NEPA's purposes, Yaak, at 718. Further, NEPA documentation must not be used to justify decisions already made. (id., quoting 40 C.F.R. sec. 1502.4)

The situation is that the "public involvement" for the BLB project started in the fall of 1987 and extended through the "draft EIS" comment period in 1993.

Yet, in spite of the "extensive" public participation period and efforts, the first "public" disclosure that LRMP classified "unsuitable lands" were intended to be cutover was only made belatedly in the BLB FEIS/ROD. The NEPA/CEQ analysis for the BLB project without doubt failed to comply the requirements as mandated by the Federal Court opinions above.

Now the Supervisor initiates another 'NEPA' analysis purportedly to study an action he previously described by saying 'the proposed treatments are needed to fully achieve the desired condition for the analysis area'. (Amendment #13 decision, 8/30/93, emphasis added)

Response: Additional public involvement was done for the Forest Plan amendment. See Public Involvement section in Decision Notice.

Since the BLB FEIS/ROD is essentially a "done deal", it is ludicrous to pretend that this "new" analysis is to accomplish anything more than developing a post-decisional rationale for the same outcome. In many years of reviewing Forest Service NEPA documentation, we doubt that we have ever before seen such a blatant self-serving and cynical approach to the NEPA process.

The cutting units in question, units 9 and 10 are within the inventoried roadless area, Allan Mountain. The units also consist of LRMP classified "unsuitable for timber harvest" lands. In fact, as was disclosed in the BLB DEIS. "about 28% of the BLB, or 4,026 acres, is biologically unsuitable for timber management." (III-49) The 8/30/93 decision inferred that "unsuitability" was because of inability to regenerate in a timely manner after even-aged cutting. "Unsuitability" may also be because of steep slopes on erosive soils over a sensitive watershed. (The units in question are on steep slopes above the Little Boulder Creek which has been significantly impacted by previous timber cutting activities, and there will be some increase in water yield because of the removal of tree canopy).

"Unsuitability may be because the land is not capable of producing more that 20 cubic feet of wood fiber per acre per year. (The units appear to be within such a low productivity area as was demonstrated on a 1983 FS map of suitable/non-suitable lands).

Unsuitability may also be because the units are economically non-suitable besides.

Yet, no disclosure was made in any of the previous "documentation" if, in fact, other reasons for an "unsultability" determination may be present.

Response: See discussion on unsuitability in Consolidated Response to Comments.

The intended proposal can be also described as attempting to segment (by proposing to accomplish in individual small actions) the intended cutting in 'unsuitable' lands across the forest which is a 'significant alteration of the Forest plan, requiring a supplemental EIS to the LRMP.

The Forest draft "Review" for a possible "Revision" of the LRMP, clearly documents the BNF timber manager's future intent to commercially cut in "unsuitable" lands by use of ill-defined "Ecosystem Management" principles as "justification". This of course makes at least 100,000 acres of currently intermixed "unsuitable" lands not "intermixed" will be likely one at besides.

By now segmenting off only individual "site-specific" amendments to the LRMP to allow timber our unsuitable lands, it conveniently enables the Bitter Root Forest Supervisor and Rangers to overlook and

a "hard look" and subsequent "disclosures" of the connected, cumulative, and potentially significant impacts that would otherwise (when examined in light of their entirely) require the Forest to initiate an amendment to the Forest Plan EIS instead.

Significance is in part defined by the CEQ regulations as "the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future action" and "whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

The CEQ regulations stipulate that 'proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement'.

The commercial cutting in unsuitable lands clearly constitutes a "connected action" under the regulations. Actions are connected if they "automatically trigger other actions which may require environmental impact statements - cannot or will not proceed unless other actions are taken previously or simultaneously and - are interdependent parts of a larger action and depend on the larger action for their justification."

The extent of the activity is presented in a self-serving "minor" light when viewed in a single, small "site-specific" proposal, but the future intent, and its extent, is clearly described by the draft "Review". The appropriate analysis should be in an amendment to the Plan, not in segmented actions avoiding such an analysis.

Response: See Determination of Non-Significant Amendment in the Decision Notice and discussion on Forest Plan Direction in the Response to Comments.

The proposal involves "individual tree selection improvement cut by helicopter". (8/30/93 decision) What is being now rationalized as being necessary for "Ecosystem Management" is quite similar to the previous process which "high-graded" out the large diameter, high-value timber, which was mostly p-pine then. Now, the Forest intends to do a similar treatment to the larger diameter doug-fir and/or spruce instead, but the fact still remains that helicopter yarding will certainly not be for pole-sized timber.

It is interesting viewing the oratory contortions the Forest goes through to "redefine" what is essentially the same type of gentle management previously applied - old growth liquidation.

This has little to do with "forest health" issues., (less than one percent of the BLB area will be treated), but much to do with a single-minded purpose of "getting out the cut".

As to increasing "forage", we could assume that the heavily cut-over lands already evident in the analysis area or the district itself would likely provide "forage" besides. Nowhere was it disclosed that site-specific analysis determined that forage is major limiting factor for the big game herds.

A risk assessment for escaped fire must be also prepared for this proposed action.

Response: The harvest prescription is described in the Consolidated Response to Comments and in the Buck-Little Boulder EIS and Project File. A risk assessment is prepared for all prescribed burns.

COMMENT ID: 3

DATE RECEIVED: June 21, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

Friends of the Bitter Root, Inc.

ADDRESS:

P.O. Box 442

Hamilton, Montana 59840

NUMBER OF SIGNATURES: 1

COMMENTS:

The 1994 EA for the Forest Plan #11 Amendment tiers both to the Buck-Little Boulder EIS/ROD (BLB) and the Bitter Root Forest Plan. All project activities must be in compliance with the Plan, which is why the supervisor and ranger are now proposing this 'amendment'. This is an 'amendment' so the managers can violate provisions of the Plan while at the same time claim they are 'complying' with the Plan.

The Forest Plan was appealed by nine conservation organizations and after six years has not yet had a 'Decision' rendered by the Chief which is a continuing violation of the Forest Service Regulations.

The 1993 BLB EIS/ROD was appealed, and the appeal was subsequently denied by the Supervisor. Therefore Administrative Review is at an end and the course of action now available is within the Federal Courts domain. The 1993 Amendment (#13) for this logging of unsuitable timberlands was also subsequently appealed, and that appeal was upheld by the Regional Forester and The Decision was remanded back to the supervisor. We therefore also incorporate by this notice all previous concerns or issues raised in our previous appeal(s) of the BLB FEIS/ROD, the 8/30/93 decision, comments on the drafts EIS and comments made during the scoping periods extending back to 1988 for this proposed timber sale.

We again reiterate our previously stated convictions that this action requires an EIS (or Supplemental EIS); also constitutes "new information significantly affecting" the premises set forth in the BNF Forest Plan, which in turn requires a "Revision" of the Plan itself; and since the BLB FEIS/ROD is essentially a "done deal", it is ludicrous to pretend that this "new" analysis is to accomplish anything more than developing a post-decisional rationale for the same outcome.

Response: The process to amend the Forest Plan is discussed in the Consolidated Response to Comments.

We maintain the proposed action is highly controversial because of the proposal to cut in unsuitable lands. This proposal to commercially log unsuitable lands is an "initial" attempt to significantly modify the Forest Plan while avoiding complying with the Forest Plan Revision process. The Forest managers claim that this proposed activity is only "site-specific" in nature, on a small area, and is not indicative of a "precedent". This can only be described a dissembling or disinformation at its best. The Forest Supervisor, rangers and managers fully intend to modify the forest Plan to now include the Plan designated "unsuitable" lands into their future logging agendas.

Response: See the Finding of No Significant Impact and Determination of Non-Significant Amendment.

The Forest managers have clearly demonstrated their intention to use the public relations concept of 'Ecosystem management' as the supporting theory for increasing the acres available for logging. This has been documented in the discussions in the Draft Forest Plan Review process; in the original BLB EIS/ROD for this logging; and within the original (1993) Stevensville South-west timber sale besides. In fact, for over one year now the Forest management team has been floating political 'trial balloons' in order to gauge the public reaction.

As stated by the supervisor in his cover letter, the affected 60 acres of unsuitable lands are a portion of the approximately 31,000 acres of unsuitable lands found within the forest Plan Management Area 1, or the approximately 91,000 acres of unsuitable lands intermixed with the 'suitable' lands located within the entire Forest Planning area. It is not difficult to perceive that the supervisor and managers, when faced with a significant 'fall down' in the 33.4 MMBF ASQ 'assumptions' of the Forest Plan, are now attempting an entire

run so as to increase the timber base by nearly 100,000 acres on a forest wide basis. Furthermore, the proposal evidences 'segmentation' (by proposing to accomplish incorporation separate 'unsuitable lands' cutting in individual small actions). The overall intent of the 'segmented' cutting in the 'unsuitable' lands across the Forest constitutes a significant alteration of the BNF Forest Plan requiring instead a supplemental EIS to the BNF LRMP.

Response: See Forest Plan Amendment section in Consolidated Response to Comments and Determination of Non-Significant Amendment in Decision Notice.

We maintain the proposed action is also highly controversial because of the proposal under the guise of "Ecosystem Management" to initiate further cutting in the remaining Roadless lands. The unsuitable lands (units 9 and 10) are within the inventoried or un-inventoried roadless area, Allan Mountain.

The Allan Mountain Roadless Area is proposed for wilderness protection within the Northern Rockies Ecosystem Protection Act (NREPA), which is supported by this organization and many others within the State and the Nation. NREPA is currently being supported by approximately 45 congressional sponsors or co-sponsors, and the proposed timber sale activity will adversely impact the opportunity for that deliberation process.

The Allan Mountain Roadless Area also provides a portion of a functioning significant *biological corridor between the largest remaining ecosystems of the Northern Rockies. The activities proposed in the EA and in the BLB EIS/ROD will further narrow and adversely affect that connection.

The proposed action, along with the earlier BLB EIS/ROD therefore does include lands that certainly have 'unique characteristics', in spite of the protestations set forth in the EA and BLB EIS/ROD. The inventoried/uninventoried Allan Mountain Roadless Area acres are representative of an 'ecosystem' that has been reduced nationally to only 5 to 10 percent of their 'pre-european' extent. Of course, it goes without saying that the controversy over the remaining roadless lands, in and of themselves, has been one of the foremost 'management problems' on a local and National basis for at least nearly 25 years.

The Forest Service has done two Nationwide roadless Reviews (RARE I and RARE II) and has again attempted to 'write-off' the majority of the remaining roadless lands during the Forest Planning process. None of these previous attempts have proven successful yet, but the forest Service is certainly still working hard at some concept that will allow them to proceed with their 'predetermined' goal of 2 and one-half decades ago

It is interesting that the Bitterroot Forest, (while now claiming they wish to practice "Ecosystem Management" for the 'good' of the Forest's health), then initiates activities such as continuing logging in the remaining roadless lands in spite of the well-known fact of the dwindling scarcity of the roadless resources on the local national and global scale. On the subject of Ecosystem Management, as utilized by the Forest Service. In Reed Noss (Missoulian, 3/30/94) was quoted as saying "we have to be very wary about how ecosystem management is used by the agencies and the politicians". "For on thing, it seems to be not much more than a public relation scheme", "We don't know what the effects of this kind of management is, its experimental."

The cutting units 9 and 10, (which this EA proposal 'authorizes'), significantly encroach further on the roadless lands and effectively narrow the boundary of the existing remaining roadless lands even further. The FS claim that since these units are not being 'roaded' they will still be available for wilderness consideration, is not believable either. Instead, the boundaries of the Allan Mountain Roadless Area will be redefined and reduced by this proposed activity in units 9 and 10.

This is in spite of the fact that the BNF's survey (as demonstrated in the Forest's draft Plan Review) showed strong support for the amenities found in roadless or undeveloped areas. Furthermore, a recent Missourian article (6/1/94) indicated that 32% of Montanans supported the NREPA proposal. We maintain the action is therefore highly controversial.

Response: See Finding of No Significant Impact in the Decision Notice. For a further discussion on roadless lands see the Buck-Little Boulder EIS.

The EA and BLB EIS/ROD proposed action is also highly controversial because of the continuing and significant loss of old growth or large diameter trees.

The EA (and the BLB EIS/ROD), even though they are required to be 'full disclosure' documents, do not complete the public as to what size or age of 'un-desireable' trees are being removed. This has been a contract the forest level besides. The BLB EIS/ROD states that no loid growth.

habitat' will be logged. This is not a convincing comment, given the propensity of the Forest managers to 'redefine' the issues.

As the Bitter Root Forest Plan stipulated: 'Stands which meet the following age criteria will usually have characteristics necessary to meet the old growth definition; [in plan]

Douglas-fir over 120 years

Ponderosa Pine 200 years or older

Mixed conifer stands over 160 years

Lodgepole pine over 80 years and larger than 6 inches in diameter* (BNF plan FEIS Vol. I, pg III-22)

The two analyses (EA & BLB EIS/ROD) mention Doug fir and ponderosa pine as examples of 'unhealthy' or 'at risk' species. "The high-risk trees include spiked top ponderosa pine and thin crowned Douglas fir." (BLB EIS at App.F2-1)

Thinning the scattered Douglas fir thickets is an acceptable option that would provide limited benefits to wildlife and timber, but asn't recommended because cost relative to benefits would be extremely high. The salvage option would limit harvest to dead and dying trees. (BLB EIS at App. F2-2)

But as the Forest Plan pointed out, "Timber harvest activities primarily affect old growth." (BNF Plan FEIS, Vol. II. pg. B-59) Since the current EA proposal is for "helicopter selective logging", it is evident the supervisor and ranger are continuing with the individual old growth tree liquidation cutting that has been a standard practice since the inception of this administrative Forest.

The ponderosa pine has been documented as being significantly overcut for nearly 25 years by the Forest's managers, (see 1971 FS Task Force [Worf] Report). The Bitter Root Forest managers also have continuously, and knowingly, logged off the large diameter ponderosa pine trees at a rate exceeding any concept of "sustained yield" for this species. This has historically been 'rationalized' by the BNF managers as necessary to support the logging industry, but in reality was only so as to add 'higher valued products' to the sale offerings.

Now the rationale has changed slightly, and while it is still claimed to be logged for 'forest health and wildlife forage', the end result is strikingly similar - continual downward spirals of the large diameter, old growth species and less of the large diameter ponderosa pine.

For all intents, old growth trees and/or habitat are an irretrievable resource since it involves upwards of 200 years to begin to recreate them, (if they even can be successfully recreated), and the Forest Service has tacitly acknowledged this in other Region 1 environmental documents.

While the supervisor and rangers have at other times previously claimed they will set aside some areas for 'future old growth', the fact is that they of course cannot control the activities of the future extending long beyond their administrative tenure or their lives.

The "spiked top ponderosa pine and thin-crowned Douglas fir" referred to in the BLB EIS as being the 'target trees' to be logged, are only "undesirable" from a torester's viewpoint of a 'managed forest'. Those conditions described are in fact completely 'natural' in the truest sense of the word.

Those "spiked top ponderosa pine and thin-crowned Douglas fir" are also highly desirable components of a functioning 'Ecosystem', in that they eventually become habitat for the insects that other forest species utilize for food sources. After the primary excavators make their holes, the trees then become homes for a variety of other forest species. The Bitter Root Forest Plan pointed out that, 'Wildlife species are dependent on the amount and distribution of old-growth forest, riparian zones, and habitat diversity." (BNF Plan FEIS Vol. 1, pg III-21) "About 43 percent of the 373 wildlife species living in the Forest use old growth stands for nesting and feeding. Without old growth forests, these species could disappear. Timber harvest activities primarily affect old growth." (BNF Plan FEIS Vol. II, pg. B-59)

Response: See Buck-Little Boulder EIS for discussion on old growth. The objective of this proposal is to maintain ponderosa pine, especially, large, old ponderosa pine on this site. See Consolidated Response to Comments for additional information.

One of the other main "purposes" claimed for the proposed action is to create more wildlife forage. Finally has not been never been scientifically demonstrated to be a limiting factor for wildlife on this Forest or but lack of security and open road density has been. The EA (and EIS/ROD) present that the "need to be a limiting factor for wildlife on this Forest or but lack of security and open road density has been.

cut the designated unsuitable lands is also related to wildlife forage needs, but then the environmental documents fail to bother to address or discuss the extensive forage created on this District (and Forest) by the past clearcutting that is so evident across the BNF landscape.

Creation of 'more wildlife forage' can therefore be viewed as another spite of spurious claims of 'Ecosystem Management'. This appears to be a violation of the scientific and professional integrity clause in the CEQ regulations. It also appears to be a violation of the current Chief's Direction to forest managers to 'tell the truth'.

COMMENT ID: 4

DATE RECEIVED: June 16, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/ ADDRESS: Daniel G. Johnson HCR 1 Box 50

Nezperce, ID 83543

NUMBER OF SIGNATURES: 1

COMMENTS:

I have no special concerns with the proposed site specific amendment to the FS allowing timber harvest on US lands in units 9 and 10 if the BLB project, especially when the proposal will assist in meeting FS goals and objectives!

COMMENT ID: 5

DATE RECEIVED: May 2, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed, Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

ADDRESS:

Lewis Karstetter 3424 Snowy Mtn View

Darby, MT 59829

NUMBER OF SIGNATURES: 1

COMMENTS:

Yes I think it would be good to start selling timber on the Bitterroot National Forest. Buck-Little Boulder Project area would be a good place to start.

We need to implement the induction of fire to restore vegetative structure to enhance wildlife habitat and Page a park like setting.

COMMENT ID: 6

DATE RECEIVED: May 2, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

Mr. & Mrs. Tim Kidd

ADDRESS:

P.O. Box 611 Darby, MT 59829

NUMBER OF SIGNATURES: 1

COMMENTS:

We would like to comment on the Buck-Little Project area. Since we don't believe in wasting our natural resources, and also since timber is a renewable resource, please consider timber harvesting as much as possible in this area and for that matter all areas for possible timber harvest in the Bitterroot National Forest.

May we suggest that areas not accessible by road, to use helicopter logging.

We believe that wise use of our natural resources should be practiced by the Forest Service and all of us as we all use timber products every day and really can't be denied timber harvest in our natural forests.

COMMENT ID: 7

DATE RECEIVED: April 12, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

Doris Milner

ADDRESS:

65 Ricketts Road

Hamilton MT 59840

NUMBER OF SIGNATURES: 1

COMMENTS:

I have discussed this decision with Ranger Rasure and now that I understand exactly what is being proposed and why, I support the proposed amendment.

We are all aware of the past overcutting of the ponderosa pine stands in the Valley, and since this proposed harvest would be done with the purpose in mind of removing the understory which has grown up under the pine due to fire exclusion in order to eventually restore the area to open pine savannah-like stands, it save tables a wise move.

I understand that the understory to be harvested will provide trees for a small sale which would pay the of the project. This is far better than hauling them off to a stacking area with no benefit to anyone

This proposed project seems to be in harmony with the Desired Future Conditions of Buck-Little Bould well as those of the Forest itself:

COMMENT ID: 8

DATE RECEIVED: April 11, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/ ADDRESS: Dennis Palmer 121 State St. #202 Hamilton, MT 59840

NUMBER OF SIGNATURES: 1

COMMENTS:

I support the proposal to amend the Bitterroot Forest Plan to allow timber harvesting activities consistent with the National Forest Management Act on MA 1 lands within the Buck-Little Boulder Project area.

support the proposal to improve cut and the introduction of fire to restore vegetation structure and ecological process on the area in Units 9 and 10. I strongly support the more open and park like stands of trees with a greater proportion of large Ponderosa Pine while increasing the natural diversity of the area.

COMMENT ID: 9

DATE RECEIVED: May 27, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)

TYPE NAME: INDIVIDUAL

NAME/

Dennis Palmer

ADDRESS:

121 State Street #202 Hamilton, MT 59840

NUMBER OF SIGNATURES: 1

COMMENTS:

support Forest Plan amendment No 11 for Buck Little Boulder EIS, I support vegetation treatments for units 9 & 10.

COMMENT ID: 10

DATE RECEIVED: May 31, 1994

TYPE CODE: 1 (1-Individual, 2-State Ag., 3-Fed. Ag., 4-Tribe, 5-public)
TYPE NAME: INDIVIDUAL

NAME/ ADDRESS:

Jack & Nita Webster 640 River Road West Plains, MT 59859

NUMBER OF SIGNATURES: 2

COMMENTS:

In regard the the Buck Little Boulder Project Area Bitterroot Forest Plan Amendment 11, we would like to again respond that we feel the Bitterroot Area has already been over logged and needs to be slowed down for

However, we are real happy that you are helicopter logging which will lessen the impact of roads. Also, to follow up with management of the area by fire could be a good tool for reforestation & wildlife funding

Make sure you don't burn all the trees left after selective logging.

RESPONSE TO COMMENTS

This consolidated response to comments provides an overview of the background information and facts pertaining to the proposed Forest Plan Amendment. It provides the key elements of the regulatory framework. Forest Plan direction, site specific information from the Buck Little Boulder FEIS, and the proposed amendment to the Forest Plan.

REGULATORY FRAMEWORK

Timber Production Suitability

National Forest Management Act (NFMA) regulations at 36 CFR 219.14 directed National Forests to identify lands not suited for timber production, during the Forest Planning process. 'Timber production' is defined at 36 CFR 219.3 as ' the purposeful growing, tending, harvesting, and regeneration of regulated crops of trees...'.

As previously stated in the proposed action section of this EA, the NFMA regulations at 36 CFR 219.27 (c)(1) also state "No timber harvesting shall occur on lands classified as not suited for timber production persuant to 219.14 except salvage sales, sales necessary to protect other multiple use values, or activities that meet other objectives on such lands; if the forest plan established that such actions are appropriate."

NFMA regulations at 36 CFR 219.14 describe the categories of land not suited for timber production. Two of the criteria for timber production suitability listed therein apply to BLB units 9 and 10:

- "...there is not reasonable assurance that such lands can be restocked (within 5 years) as provided in 219.27c(3)."
- "The lands are not cost efficient over the planning horizon in meeting forest objectives, which include timber production".

Forest Plan Amendments

NFMA regulations at 36 CFR 219.10(f) allows for Forest Plan amendments to be made by Forest Supervisors. Such an amendment requires a determination of significance of the change be made. "If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedure."

The Forest Service Land and Resource Management Planning Handbook (FSH 1909.12) at 5.31a.1 states ... "If a proposed project or alternative action is not consistent with the Forest Plan, there are then three options for consideration:

- a. Modify the proposal to make it consistent with the Forest Plan
- Reject the proposal.
- c. 'Amend the Plan to permit the proposal'.

Further direction in that handbook at part 5.32 provides direction on the process to amend the Forest Plan. The attached document 'Determination of Non-Significance for the Site Specific Forest Plan Amendment' provides the information necessary to determine whether the proposed change to the Forest Plan is or is not a significant change.

BITTERROOT FOREST PLAN DIRECTION

Chapter One of the the Forest Plan Amendment 11 EA describes the Forest Plan goals and objectives that would be wholly or partially accomplished by allowing the proposed timber harvest to occur in units 9 and 10.

The Bitterroot Forest Plan provides definitions for the following key terms:

Salvage Harvest: The cutting of dead, dying, or deteriorating (e.g. because they are overmature or materially damaged by fire wind, insects fungi, or other injurious agents) before they lose their commercial value.

Suitability: The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.

Suitability Analysis: Process of identifying National Forest Lands to be managed for timber production (three stages described)

Suitable Forest Land: Forest land (as defined in 36 CFR 219.3) for which technology is available that will ensure timber production without irreversible resource damage to to soils, productivity, or watershed conditions; for which there is reasonable assurance that such lands can be adequately restocked (as provided in CFR 219.14); and for which there is management direction that indicates that timber production is an appropriate use of that area.

Timber Production; same definition as the one quoted from the NFMA regulations above.

As stated in the description of the proposed action in this EA, a Bitterroot Forest Plan standard for MA-1 lands states, "Lands unsuitable for timber management will not be scheduled for timber harvest, except salvage harvest can be programed when necessary to meet the goals and standards of the management area."

The Forest Plan provides direction on Amendment and revision on page IV-5, pursuant to 36 CFR 219.10f.

The criteria use to differentiate lands suitable and unsuitable for timber production are described in the Bitterroot Forest Plan Final Environmental Impact Statement, Volume II, Appendix B, Pan III, "The Forest Planning Model, 'Section C', Identification of analysis areas".

THE BUCK LITTLE BOULDER FINAL ENVIRONMENTAL IMPACT STATEMENT AND RECORD OF DECISION

Pages I-1 to I-3 of the BLB Final EIS describe the purpose and need for action in the BLB project. One of the stated purposes is to 'maintain and create healthy stands of timber while maintaining the natural diversity within the project area. Most pertinent to units 9 and 10 is the stated need "...the vegetation has shifted toward an increasingly multi-layered structure and shade tolerant species composition in the ponderosa pine forest cover type. This condition puts those stands at risk from both insects and disease and loss to stand replacing wildfire".... "The proposed activities are needed to reduce the risk of extensive tree mortality due to insect disease, and fire. They are also needed to maintain vegetation and fuels within the range of natural conditions and to maintain the areas natural diversity."

Appendix F-2 of the BLB Final ElS documents the projects silvicultural diagnosis. Pages App F2-1 and 2 describe the silvicultural diagnosis for the improvement cut proposed in units 9 and 10. A description of the existing condition and site conditions in units 9 and 10, management objectives, and target stand descriptions are provided. As described, units 9 and 10 contain a mix of areas that are partially biologically unsuitable for timber production and, at the present time, economically unsuitable for timber production. Due to those reasons, a target stand that meets timber production objectives was not developed. The target stand was designed to meet wildlife objectives by providing for big game and a higher proportion of ponderosa pine for wildlife species that prefer this tree species.

The stand diagnosis describes the rationale for prescribing an improvement cut in units 9 and 10. The desired condition would not be fully met on those sites if only a salvage harvest were implemented; the one narvest option allowed by the Forest Plan. A salvage harvest would only remove dead and dying trees. As stated in the diagnosis, the improvement cut prescription would allow the opportunity to salvage dead and dying trees and also permits the removal of competing overstones, diseased trees, and commercial thinning. The harvest prescription in combination with subsequent understory burning would perpetuate the open and irremoulti-storied stand structure that historically existed on these sites. The combination of the improvement

and prescribed fire would best meet wildlife objectives by increasing forage production and improving the chances of ponderosa pine being naturally established and maintained as a component of the stand. As stated in the diagnosis, "without treatment the combination of successful fire suppression and natural succession will result in stands dominated by Douglas fir and the associated insects and disease". The prescribed treatments would move units 9 and 10 toward the stated desired condition and meet the stated purpose and need for action.

The areas prescribed for treatment by an improvement cut and understory burning in units 9 and 10 is on a southerly aspect where climatic conditions are warm and dry. Within the areas proposed for treatment there is an estimated 10 to 20% of the area occupied by rock outcrops and tallus slopes. These areas are not forested and no harvest activity would occur on them. There is an estimated 50 to 60% of units 9 and 10 which are more heavily forested, are reasonably productive, and if roaded access existed, would meet the criteria for land suitable for timber production. Without roads these areas are largely economically unsuitable for timber production because of their remote location. If these sites were managed for timber production the necessary access on foot or by helicopter for reforestation, exams, and various stand tending operations would be cost prohibitive when all costs of timber production are considered together. The remaining 20 to 40% of the units 9 and 10 represent a gradient of forest site conditions between the two conditions described above. That 20 to 40% of units 9 and 10 are largely unsuitable for timber production due to shallow soils and dry conditions that cause low productivity and an increased risk of artificial regeneration failure. In summary, there are two aspects of the 'unsuitable for timber production' determination in units 9 and 10; areas that are biologically suitable for timber production but are not economically suitable due to access limitations, and elsewhere, lands that are biologically unsuitable for timber production due to shallow soils and dry conditions.

Silviculture prescriptions and stand marking instructions for units 9 and 10 are found in BLB project file documents 251 and 252. As documented therein, the trees to be harvested are those "expected to die within the next 10 years, except that no more than 40% of the basal area should be removed on any area larger than two acres". In other words, in isolated cases where numerous dying trees exist, more than 40% of the basal area could be removed, but only in areas no more than two acres in size. The Douglas-fir overstory and up to half the ponderosa pine overstory can be removed from any area where there is a satisfactorily stocked conifer understory. Priority is to be given to removing diseased trees, primarily Douglas-fir trees infected with dwarf mistletoe, where there is an understory of conifer trees present. Selecting against Douglas-fir and retaining ponderosa pine whenever possible is prescribed. In addition, a portion of stand 9 is to be commercially thinned and stocking will be reduced by 30% in that area.

For the reasons stated above, timber production, or producing regulated crops of trees, is not intended on these sites. Fire suppression has allowed many of the trees that historically would have been lethally scorched by periodic fires to reach commercial size. Units 9 and 10 are supporting more trees, mostly more shade tolerant Douglas-fir, than historically existed. Their presence poses a dual threat to the older ponderosa pine and any new ponderosa pines seedlings that become established. First, competition for the moisture, nutrients, and light necessary to exist has intensified due to more crowded conditions; and second, should a fire occur there is a "fuel ladder" present that would carry what would otherwise be a ground fire into the upper canopy of old ponderosa pine and lethally scorch them. With fire suppression, many of the Douglas-fir trees are now too large to be lethally scorched by a relatively low intensity prescribed understory burn. The prescribed treatment would remove many of the Douglas-fir to reduce the the threat they pose and also to provide sawlogs for timber products. Once that treatment is implemented subsequent treatments should emphasize periodic prescribed understory burns to prevent the encroachment of shade tolerant trees and the accompanying threat of losses to overstory ponderosa pine from occurring again.

A number of resource issues were raised by those who provided comments on the EA. The following references describe the analysis documentation pertaining to those issues.

Chapter III, pages III-4 to III-6 of the BLB Final EIS describe in detail the historic and existing condition of the vegetation composition and structure in the ponderosa pine forest type. Pages IV-5 to IV-8 of the FES describe the effects of the alternatives on vegetation composition, structure and ecological function for the ponderosa pine forest type (which includes the areas occupied by units 9 and 10). The Record of Decision pages 2 and 3, discusses the purpose and need for the proposed treatments in the ponderosa pine/Dougles fireforest type.

BLB final EIS pages III-17 to III-24 describe the historic and existing conditions of the wildlife aspects of biological diversity, including fragmentation, corridors, and TES species. Pages IV-16 through IV-23 of the FEIS describe the effects of the alternatives with respect to fragmentation, corridors, and TES animal species.

BLB FEIS pages III-33 to III-38 and maps III-7 describe the existing condition of old growth, old growth management indicator species, and old ponderosa pine trees in the BLB area. Pages IV-37 to IV-38 describe the effects of the alternatives on old growth. old growth MIS, and individual old ponderosa pine trees. Tables IV-6, IV-7, and IV-8 display the effects of the alternatives on old growth in the Little Boulder Greek Drainage, in MA-1 lands, and in the ponderosa pine/Douglas-fir type (all three of these locations pertain to units 9 and 10). Effects of the alternatives on individual old pondersoa pine tees are documented on pages IV-45 to IV-48 of the BLB EIS. Specific references to the prescribed treatments in units 9 and 10 and the effects on ponderosa pine are made on page IV-46.

The roadless lands in the BLB area are described in detail on pages III-65 to III-68 of the FEIS. Effects of the alternatives on roadless lands are documented on pages IV-82 through IV-92 and map IV-1 of the FEIS. Additional discussion of the roadless issues is documented in Chapter V of the FEIS.

Pages III-64 and Map III-5 identify the lands unsuitable for timber production in the BLB area. Suitability for timber production and the alternatives are discussed on IV-80 of the FEIS. The map accompanying this Forest Plan Amendment 11 EA, 'BLB Timber Harvest in MA-1 Unsuitable Lands', shows units 9 and 10 and the lands unsuitable for timber production.

PROPOSED FOREST PLAN AMENDMENT 11 AND THE DECISION AT HAND

The proposed action would allow a silvicultural harvest prescription, an improvement cut, to be implemented in two areas totaling about 60 acres that are recognized as unsuitable for timber production. It would not change the designation of those lands from the "unsuitable for timber production" to "suitable for timber production"

The proposed action is premised on the finding that the treatments are "necessary to protect other multiple use values...on such lands" (not suitable for timber production)...."if the Forest Plan establishes that such actions are appropriate" (36 GFR 219.27(c)(1)).

Timber production, as defined in the NFMA regulations and the Forest Plan is not proposed to occur in units 9 and 10. The need to address vegetation species composition and stand structures in the ponderosa pine/Douglas-fir forest type, conditions resulting from decades of fire suppression, has been established for the lands occurring in units 9 and 10. The prescribed treatments were designed to address those needs. Those treatments fall in the category provided in the NFMA regulations which would allow for "sales necessary to protect other multiple use values". The proposed Forest Plan amendment recognizes that such an action is appropriate and should be allowed by the Forest Plan.

The previously mentioned Forest Service Land and Resource Management Planning Handbook (1909.15) also provides direction when a proposed project is not consistent with the Forest Plan and specifies three options to consider. Those considerations are addressed in the following paragraphs.

The option to modify the proposal to make it consistent with the Forest Plan, only salvage harvest, is addressed in the silvicultural diagnosis for stands 9 and 10. That option would not fully meet the stated management objectives or target stand conditions. Therefore, the proposed treatments were not modified for the sake of Forest Plan consistency. The option to only use prescribed fire to meet target conditions for the BLB project was raised in a comment on the Draft EIS (refer to page V-41 of the Final EIS). Limiting management practices to only prescribed fire in units 9 and 10 would not meet target conditions as effectively as the combination of timber harvest and prescribed fire. As stated previously, a low intensity ground fire would not lethally scorch many of the trees that are surplus to the target stand condition, if stocking is not reduced to levels more consistent with natural conditions, competition for water and nutrients will continue to increse. This will result in stands that are more stressed and susceptible to insect and disease attacks in addition, the risk of unnaturally intense stand replacing fires will increase. On sites such as these, where selar radiation is high and moisture is limited, shade is often necessary for regeneration to become established in the event of an unnaturally intense fire on these sites, resulting in the loss of overstory trees and the shade and seed they provide, recovery to a forested condition would be extremely slow and uncertain. Such as

change in vegetative condition would have some adverse consequences to the native plants and animals that historically have used and are adapted to these areas, as well as to the visual and recreational attributes that humans value.

The option to modify the proposal to only harvest on the suitable lands in units 9 and 10 and not harvest on the unsuitable inclusions within those areas was not studied in detail. The vegetation conditions and restoration needs that the improvement cut was designed to adress exist independently of any "suitable/unsuitable" land classifications, so that option was not developed as an alternative.

Rejection of the proposal to treat units 9 and 10 was considered as part of four alternatives considered in the BLB Environmental Impact Statement. The purpose and need for action was established for the prescribed treatment. The consequences of not implementing the prescribed treatments have been described and have some adverse effects. The option to reject the proposal is being considered in the decision at hand.

In the Record of Decision for the BLB project, the responsible official recommended that the Forest Plan be amended to allow for the prescribed improvement cut in units 9 and 10 to occur. The option to allow the proposed treatments by amending the Forest Plan is being considered in the decision at hand.

This amendment is not inconsistent with efforts to revise the Forest Plan. The proposal deals with more site-specific conditions on these particular lands and proposes actions that are ecologically based on the ponderosa pine ecosystem. The findings here are similar to the findings on other sites on the Forest. As stated in the Five-year review, "An extensive belt of low elevation, park-like, old growth ponderosa pine has been changed by logging and fire suppression. Now, these forests are dominated by Douglas-fir, multi-storied and overstocked. Disturbances have shifted from underburns and low levels of insect and disease activity to stand replacing fires and epidemics."

In addition, the amendment does not change many of the overreaching Forest Plan decisions like Management Area designations. The suitable/unsuitable land base remains intact. The amendment primarily makes provisions for the treatment of some site-specific lands for ecological objectives.

BITTERROOT NATIONAL FOREST Land and Resource Management Plan

Amendment Number 11

June 28, 1994

Amend Bitterroot National Forest Plan (September, 1987) to add:

MA 1, Chapter 111-5, 3.e.(9)

(9) Lands Unsuitable for timber management will not be scheduled for timber harvest except for salvage sales, sales necessary to protect other multiple use values or activities that meet other objectives on such lands if the forest plan establishes that such actions are appropriate. (NMFA 36 CFR 219.27(C)(1)). The Forest Plan establishes that such actions are appropriate for: Units 9 and 10 of the Buck Little Boulder Project located within the proximity of Sections 19 and 20, T1S, and R20W on the West Fork Ranger District.

END OF AMENDMENT



Forest Service Moose Creek Ranger District P. O. Box 464 Grangeville, ID 83530-0464 (208) 983-2712

Reply to: 1920/1950/2320

Date: January 18, 1995

Dear Citizen,

Attached is a Decision Notice, Finding of No Significant Impact, and Environmental Assessment for a non-significant amendment to the Selway-Bitterroot Wilderness General Management Direction. The General Management Direction is an appendix to the Bitterroot, Clearwater, Lolo and Nez Perce Forest Plans.

This decision establishes goals, objectives, management standards, and monitoring elements that address vegetation issues in the Selway-Bitterroot Wilderness.

This decision is subject to appeal pursuant Forest Service regulations in 36 CFR 215.7. Appeals must be post marked or received within 45 days from January 20, 1995. Send appeals to Appeals Deciding Officer, Regional Forester's Office, USDA Forest Service, P.O. Box 7669, Missoula, MT 59807. Appeals must meet the requirements of 36 CFR 215.4.

If you would like further information regarding this decision, please contact me at the Moose Creek Ranger District office.

Sincerely,

DAN RITTER

Selway-Bitterroot Wilderness Coordinator



DECISION NOTICE

and

FINDING OF NO SIGNIFICANT IMPACT AND DETERMINATION OF NON-SIGNIFICANCE

for

Adoption of an amendment to the Selway-Bitterroot Wilderness General Management Direction which is an appendix to the Bitterroot, Clearwater, Lolo, and Nez Perce Forest Plans

BITTERROOT FOREST PLAN AMENDMENT NO. 12 CLEARWATER FOREST PLAN AMENDMENT NO. 12 LOLO FOREST PLAN AMENDMENT NO. 21 NEZ PERCE FOREST PLAN AMENDMENT NO. 19

Decision

It is my decision to select Alternative 2 as described in the September, 1994 Environmental Assessment titled "Vegetation Management Direction for the Selway-Bitterroot Wilderness. This decision establishes goals and objectives for managing the Selway-Bitterroot Wilderness within ecosystem management principals. It specifically addresses direction to diminish the spread of weeds, ensure that impacted sites are restored with native vegetation, and maintain or restore rare plant populations.

The decision will amend the current Selway-Bitterroot Wilderness General Management Direction by adding goals, objectives, management standards and monitoring indicators contained in the document titled "Vegetation." Management guidelines are included that provide managers with examples of how to implement the goals, objectives, standards and monitoring.

The amendment will replace current pages in the Selway-Bitterroot Wilderness General Management Direction pages with new pages attached to this decision notice.

Rationale for Decision

I have considered reasonable alternatives and possible environmental effects of the proposed action in making my decision to approve this amendment. Public participation has been encouraged throughout the development of the proposed amendment. Members of the public were asked to identify issues early in the amendment process (June 1989) and were given the opportunity to comment on the goals and objectives in the first draft of the amendment. Nine subsequent public meetings were held to review drafts of the proposed amendment and discuss new issues. Letters were sent to public interests in the areas surrounding the Bitterroot, Clearwater, Lolo and Nez Perce National Forests to solicit comments on the final draft. Three responses were received during this final scoping phase. Two were supportive of the proposed amendment and one was concerned about the effects on recreation use from management actions that may result from the amendment. Based on the environmental effects analysis in the EA, I have determined than any effects on recreation use as a result of this amendment will not be significant. The effects of any projects that may be proposed to implement this direction will be disclosed in a site specific environmental analysis.

The Upper Columbia Basin Environmental Impact Statement (EIS) is currently being prepared and will include the Selway-Bitterroot Wilderness as part of the analysis area. This amendment will not preclude

any changes in management direction that may result from the EIS. This amendment completes a process that has been underway since 1989. It focuses on a few management issues (weeds, native plants, natural diversity) and will provide managers with more meaningful direction to address priority wilderness problems.

I believe my decision is in compliance with all applicable laws and regulations. I did not select Alternative 1 - No Action because the current direction in the forest plans for vegetation management in the Selway-Bitterroot Wilderness is inadequate and does not provide managers specific direction for controlling the spread and introduction of weeds, ensuring the viability of rare plant populations and protecting native plant communities.

Determination of Non-Significance (NFMA)

Based on my review of the following factors, I have determined that the Proposed Action (amend the Selway-Bitterroot Wilderness General Management Direction with new management direction titled "Vegetation" - Alternative 2 in the Environmental Assessment) is not a significant change in the Forest Plan. The determination has been made in accordance with the requirements of the National Forest Management Act (16 USC 1604 (f)(4), 36 CFR 219.10 (e) and FSM 1922.5).

Although the proposed amendment applies to the entire 1.3 million acre Selway-Bitterroot Wilderness, it does not alter the level of goods and services projected by the forest plans.

The Proposed Action will become effective following appropriate public notification and completion of procedures for administrative review of the decision.

Finding of No Significant Impact (NEPA)

The direct, indirect and cumulative impacts of this proposed amendment have been reviewed and documented in the Environmental Assessment (EA) and project file.

Based on this review, I have determined that this is not a major federal action that would significantly affect the quality of the human environment, individually or cumulative with other actions and therefore an environmental impact statement is not needed.

Implementation of management activities after the adoption of this amendment will be consistent with the management goals, objectives, standards and guidelines, and monitoring requirements outlined in the 1992 Selway-Bitterroot General Management Direction (GMD). The GMD is an appendix to the Bitterroot, Clearwater, Lolo, and Nez Perce Forest Plans.

The determination of no significant impact is based upon the following factors in accordance with the National Environmental Policy Act (40 CFR 1508.27):

There are no known effects to the human health and safety, endangered, threatened or sensitive species or its critical habitat, or cultural and historic values.

The physical and biological effects are limited because of the programmatic nature of the Proposed Action. For example, the vegetation direction emphasizes the control of noxious weeds but does not make decisions to treat them or on types of treatment that may be used Therefore, this action does not set a precedent for other projects that may have significant effects. The effects of management actions that may occur to implement direction found in the

Proposed Action will be analyzed on a project specific basis according to regulations under the National Environmental Policy Act.

There are no known effects on the human environment that are highly uncertain or involve unique or unknown risks, and based on scoping responses, the effects of the Proposed Action are not likely to be controversial. Although the use of herbicides to control weeds is controversial, the proposed action does not advocate the use of herbicides or any other method of weed control.

There are no known significant irretrievable or irreversible commitments of resources and the Proposed Action does not threaten violation of federal, state or local law.

This decision is a refinement of existing direction in the Selway-Bitterroot Wilderness General Management Direction which is an appendix to the Bitterroot, Clearwater, Lolo, and Nez Perce forest plans. This decision is consistent with the overall goals and objectives in the Forest Plans.

This decision will be implemented no sooner than seven (7) days after publication of this decision.

This decision is subject to appeal pursuant to 36 CFR 217. A notice of appeal must be filed with the Regional Forest, USDA Forest Service, Federal Building, 200 East Broadway, P.O. Box 7669, Missoula, MT 59807 within 45 days after the publication date of this decision. For additional information concerning this decision, contact Dan Ritter, Selway-Bitterroot Wildemess Coordinator, Moose Creek Ranger District, P.O. Box 464, Grangeville. ID 83530.

STEPHEN K, KELLY Forest Supervisor

Bitterroot National Forest

Date

JAMES L. CASWELL

Forest Supervisor

Clearwater National Forest

11/21/94

ROBERT P. MEUCHEL

Acting Forest Supervisor

Lolo National Forest

11/10/94

Date 11/29

LKING

Forest Supervisor

Nez Perce National Forest

FOREST PLAN AMENDMENT

Bitterroot National Forest Land and Resource Management Plan Amendment 12

Clearwater National Forest Land and Resource Management Plan Amendment 12

Lolo National Forest Land and Resource Management Plan Amendment 21

Nez Perce National Forest Land and Resource Management Plan Amendment 19

Specific changes to the Selway-Bitterroot Wilderness General Management Direction Include:

- 1. Replace the "Table of Contents" with "Table of Contents revised 9/94"
- Replace Chapter D, "Vegetation" (existing Page D-1) with the new Chapter D, "Vegetation", Pages D-1 through D-11.
- 3. Replace Chapter E, "Forage" (existing pages E-1 through E-2) with the new Page E-1.
- Replace "Appendix A" (existing Pages Appendix A-1 through A-2) with the new "Appendix A". Appendix Pages A-1 through A-3.
- Replace "Appendix B" (existing Appendix Pages B-1 through B-2) with the new "Appendix B", Appendix Pages B-1 through B-3.

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This section originally titled Forage was combined with Section D - Vegetation in a 1994 amendment. Management direction for forage can now be found in Section D - Vegetation.

D. VEGETATION

Goals:

Vegetation is composed of native plant communities that represent the natural diversity of the Selway-Bitterroot Wilderness ecosystem in composition (kinds and amounts of vegetation), structure (arrangement of vegetation), and function (processes like succession, decomposition and nutrient cycling).

Vegetative diversity and processes are maintained by natural disturbances such as fire, wind, avalanches, and insects and disease.

New noxious weed populations are eradicated. Existing undesirable and noxious weed populations are geographically contained and are not increasing.

Viability of rare plant populations is maintained or is restored if human impacts have adversely affected them.

Wildlife habitat and natural processes such as nutrient cycling are not adversely affected by the human use of standing and down dead wood.

Grazing of pack and saddle stock does not adversely affect native plant and animal populations, water quality and soil conditions.

Objectives:

New populations of noxious weeds identified in the Wilderness will be eradicated.

Percent cover of designated weed species in Key Areas will decrease or remain stable from year to year.

Designated weed species will not occupy Weed Free Areas.

Resource conditions will meet individual grazing management plan standards.

All known rare plant populations will be monitored to ensure that self-sustaining populations are maintained.

Management Standards:

Priority areas for prevention and control of weed populations will be where weeds threaten to spread into Weed Free Areas, boundaries of existing weed populations targeted for containment, and areas critical to plant and animal species habitat.

Methods used in the eradication or containment of noxious or undesirable weed populations will be designed to have no significant adverse effects to native plant or animal populations or natural processes. Manual and cultural removal of weeds will be evaluated first and given preference over the use of herbicides and biological control methods. Introduction of approved biological control agents will only be allowed if the agent is host specific. Site specific environmental analyses will be conducted prior to initiating control methods.

Native plants, appropriate to the specific habitat type, will be used when rehabilitating sites. The first priority in selecting seeds or plant propagation materials will be to collect on, or adjacent to, the site. Introduced species may be retained if they are non competitive and naturalized.

Priority for implementing management actions to move toward desired conditions will be based on the severity of human impacts and sensitivity or uniqueness of the associated ecologic land unit type.

Monitoring and Evaluation Indicators:

New populations of noxious weeds identified and eradicated.

Percent cover of designated weed species in Key Areas.

Presence of designated weed species in Weed Free areas.

Monitoring indicators listed in Grazing section of Vegetation Management Guidelines.

Elements of individual grazing management plans that address resource conditions.

Current fire regimes compared to historic regimes.

Dead wood retention in heavily used camp areas.

Population trends of rare plant species.

Management Guldelines:

The following guidelines are operational in scope and are a list of "how to's" that managers may use to achieve the goals and objectives.

Inventory and Classification

Vegetation management efforts will primarily focus on maintaining natural processes and a landscape mosaic within the range of natural variability. However, elements such as rare plants alpine lakes, hot springs and other special features will be given individual attention in vegetation inventory, classification, and mapping efforts.

A vegetation classification and mapping strategy will be used in conjunction with the Selway-Bitterroot Wilderness Opportunity Class map to help determine acceptable levels of human use in areas based on ecologic considerations. The classification will also provide the framework for identification of potential species habitat.

Ecologic land units will be mapped in the Wilderness to describe areas of different biological and physical potentials that define the limits or range of existing and future ecologic conditions. Important landscape features such as vegetation patterns and habitat linkages will be identified. This information, in combination with inventories of existing vegetation, wildlife, and human aspects, will facilitate an ecological approach to wilderness planning and management.

Fire

Fire is a primary force in sustaining natural composition, structure and function in the Selway-Bitterroot Wilderness ecosystem.

Existing conditions and natural conditions will be identified and compared to establish management needs. Where fire suppression activities have disrupted natural processes, discontinuing suppression should be considered.

Threatened, endangered and sensitive plant and animal species habitat will be addressed in all fire management planning.

Insects and plant pathogens

Native insects and disease have an important role in maintaining natural ecosystem processes (ia energy/nutrient cycling, wildlife habitat) by killing and defoliating vegetation.

Insects and disease function differently in disturbed ecosystems. Long term fire suppression can create artificially large insect and disease populations. Therefore, outbreaks that originate on disturbed lands may have an unnatural influence in wilderness.

When unnatural outbreaks on adjacent lands threaten natural processes in wilderness, control measures should be initiated outside the Wilderness. Native insect and disease outbreaks originating in the Wilderness will be allowed to fulfill their role whenever possible. Management of insect and disease populations, that have the potential to spread across administrative boundaries, will be evaluated site specifically and negotiated between adjacent ownerships.

Weeds

Many non-native plant species reside in the Selway-Bitterroot Wilderness. Some are more influential than others. Aggressive, introduced species, such as spotted knapweed and yellowstar thistle, displace native grasses and forbs. In addition to changing the composition of natural communities, reduction in native plant populations can lead to decreased wildlife forage, soil instability, and can influence the role of natural fire in the ecosystem.

Humans can contribute to weed encroachment in the Wilderness, not only by carrying weed seeds on their clothing and equipment, but by transporting seeds on dogs, livestock, and in livestock feed. Weeds can also be transported by aircraft and fire fighting activities.

The introduction of any new weed species will be actively prevented. Forests will cooperate with counties and states to develop weed free livestock feed programs and in the interim, use of certified weed free feed will be encouraged both at portals and within the Wilderness.

Education efforts will focus on the use of prevention measures to address the transport of weeds by aircraft, stock, people, dogs, and fire lighting activities.

Travel routes to the Wilderness (roads or trails) and portals will be managed to control weeds, with priority on roads or portals accessing areas that are highly susceptible to weed encroachment-interior airfields and administrative sites inside or associated with the Wilderness will also be weed control priorities.

A number of Weed Free Areas will be identified on each district. These areas will represent different plant communities, and will be managed in a weed-free condition by containing the weeds outside the area. Based on inventory data, these areas could be either completely free of weeds, or may be free of specific, designated species. Species will be "designated" on each District by the District Ranger in close consultation with Forest Supervisors and other agencies responsible for the management and control of exotics. State noxious weed lists will be consulted when determining weed management priorities.

When control of a weed population is being evaluated, all applicable control practices for a given species will be considered. The minimum tool principle will be applied in that the methods that accomplish control objectives while causing the least disturbance to the wilderness resource will be selected.

Key Areas for monitoring will be identified throughout the Wilderness based on ecologic land unit type. These will include areas where weeds are likely to displace native plant communities, where weeds are likely to impact critical wildlife habitat, areas with differing levels of infestation, and weed-free areas. Existing weed populations boundaries that are targeted for containment will also be identified as Key Areas. Specific weed species to be monitored will be designated for each Key Area.

Cooperative agreements will be developed with owners of private inholdings and adjacent lands, user groups, and adjacent public land managers to prevent the spread of introduced plants. Cooperative agreements will also address education as appropriate.

Assertive information and education programs will be developed to help achieve management objectives. Stock users, pilots and other visitors will be contacted prior to entering the Wilderness and at Wilderness portals when possible.

Outfitter and guides permitted in the Wilderness, state outfitter/guide boards, and other stock user groups will be included in information, education and cooperative efforts. Opportunities for outfitters

to help control weeds in their areas of operation will be outlined in the operating plans of their special use permits. Hunter information and education will also be accomplished through coordination with state wildlife agencies. Pilot organizations and agency air operations personnel will be included in these efforts.

The message will convey both the goals of vegetation management and appropriate prevention practices to avoid transportation of weeds by people, stock, dogs, vehicles and aircraft. Education messages will address pre-trip, portal, and wilderness travel practices and weed identification.

Possible Management Methods

The management methods contained in this document serve as a menu of possible actions for managers. They are not an exhaustive list nor do they preclude other actions not listed. They are ranked from least restrictive to most restrictive.

For preventing new introductions:

- Educate all users, particularly stock users and pilots, encouraging preventative practices.
- Initiate cooperative agreements with adjacent land owners or managers.
- Encourage or require specific knowledge and/or equipment (i.e. using nosebags instead of feeding on ground or having the knowledge to contain weeds)
- · Eradicate aggressive species from portal areas or boundary areas-
- Require the use of certified weed free feed.
- Prohibit the use of hay
- ·For retaining identified weed free areas:
- Educate all users, particularly stock users and pilots, encouraging alternative practices
- Encourage or require specific practices and/or equipment
- Contain introduced species to areas outside the weed free areas
- Eradicate introductions into the weed free areas
- Discourage or prohibit types of use linked to introductions
- Discourage or prohibit overnight use
- Require the use of weed free feed
- ·Prohibit the use of hay

Rare Plants

There is little information documented on the status of rare plants in the Selway-Bitterroot Wilderness. There are several known Forest Service designated "sensitive" species in the Wilderness and others that have potential habitat there. Little monitoring has been done on these populations.

All human activities will be managed to protect and recover rare plants. Management of federally designated threatened, endangered and sensitive species and State Species of Special Concern will be conducted in cooperation with state and federal agencies in accordance with recovery plans.

Potential habitat for rare plant species will be identified during area analyses and project planning. Biological evaluations and assessments will be conducted for proposed and existing activities that may affect rare plants.

Research and monitoring necessary to protect and perpetuate these species will be allowed and will utilize the minimum tool principle. Proposed research projects will be reviewed to assure consistency with the Wilderness management objectives that pertain to specific proposed activities.

Rare plant protection will be considered in all plans for management activities and projects within the Wilderness.

Possible Management Methods

- Education
- Manage fire to sustain populations when appropriate
- •Use trail maintenance standards to direct use to more resistant sites
- Signing at trailhead
- Encourage or require use of certain practices, behavior and/or equipment
- ·Limit grazing in specific areas
- Discourage or prohibit camping on certain sites or locations
- ·Discourage or prohibit overnight use
- Seasonal campsite closure

Live trees and shrubs

Damage to trees and shrubs is common in many heavily used sites in the Wilderness. Impacts include hacking, carving, girdling and root damage due to trampling.

Management actions to address damage to trees and shrubs will be based on the severity of the damage and the sensitivity of the species. Species that are less common and/or less resistant to damage, like thin-barked aspen and birch trees, will be given higher priority than those that are more common and/or more resistant to impacts.

Possible Management Methods

- Education
- Enforce CFR 261.9 a. which prohibits damaging any natural feature or other property of the United States.
- •Use of news media to inform of conditions and restrictions
- Restore site or components of site to prevent further degradation
- Signing at trailhead
- Signing on site
- Encourage or require use of certain practices, behavior and/or equipment
- Discourage or prohibit overnight use
- Concentrate and channel use with facilities
- Remove damaged features

Standing and down dead wood

Snags and large, downed wood play an important role in maintaining natural processes. Nutrient and energy cycling and wildlife habitat are examples of functions that the dead wood component contributes to. Dead wood is commonly used for firewood by Wilderness visitors. In some high use areas long-term absence of dead wood can have a significant impact on site productivity.

In heavily used camp areas, monitoring will be conducted to assess dead wood retention. The amount of dead wood retention will be evaluated by comparing impacted sites with unimpacted sites in comparable vegetation community types. Monitoring results can be used in implementing management strategies to maintain or restore dead wood functions where necessary.

Possible monitoring indicators could include: 1) Distance necessary to travel from campsite to obtain firewood, 2) Percent volume or size of down wood retained at a site, 3) Percent or size of snags retained at a site, 3) Number of snags or logs inhabited by wildlife.

Possible Management Methods

- ·Use of news media to inform of conditions and restrictions
- Signing at trailhead
- ·Signing on site
- Encourage or require use of certain practices, behavior and/or equipment
- Encourage or require use of alternative fuel source in designated areas
- Encourage or require restrictive length of stay
- Close identified sites to snag cutting
- Close identified sites to downed wood gathering
- · Discourage or prohibit overnight use
- Seasonal campsite closures
- Use trail access management to direct use

Grazing

There are no established cattle or sheep grazing allotments in the Selway-Bitterroot Wilderness. Pack and saddle stock grazing occurs throughout the Wilderness in conjunction with outfitter operations. Forest Service administration and recreational visitor use.

Grazing management plans for pack and saddle stock will be developed and based on: 1) ecologic land unit type; 2) needs of other resources and; 3) grazing capacity.

Range analyses will be conducted to provide an inventory of the resource and a narrative evaluation of the resource data including management alternatives for grazing management planning.

Guidelines for completing a range analysis are listed below:

Inventory

- Determine suitability of areas currently grazed by pack and saddle stock.
- Map vegetation type, soils, condition/trend, production, utilization, etc.
- Identify potential conflicts with other resources. An assessment of wild ungulate grazing can be included if necessary.

Compilation of Data

- Acres by condition/trend
- Comparison of present and potential condition Describe successional stages Determine cause of site condition Address site rehabilitation needs
- Grazing capacity

- Actual use records
- Grazing history

Evaluation

 Develop and compare alternatives to resolve discrepancies between grazing capacity, actual use and needs of other resources.

Grazing management plans will be developed based on range analysis information. The procedure for developing these plans is outlined in the Northern Region Range Analysis Handbook (FSH 2209.21, R-1, Chapter 830, Appendix D) and summarized below:

Action Plan

- Existing use and grazing capacity
- Grazing system
- Livestock management

Monitoring Plan

- Production/utilization studies
- Condition/trend benchmarks
- Visual examinations

Management objectives will be developed within the grazing management plans based on ecologic land unit type.

The following is a menu of possible monitoring indicators that could be used to measure progress toward achieving the management objectives:

Species composition and density, forage production, forage utilization, riparian condition, time of year site is grazed, length of time site is grazed, soil condition, salt containment, type of stock, number and behavior, competition with wildlife for forage, displacement of wildlife, potential threatened, endangered and sensitive species habitat.

Displacement of or competition with threatened, endangered and sensitive animal and plant species, and other species that may be affected, will be addressed in the grazing management plan.

Priority for establishing grazing management plans will be based on ecologic land unit status and sensitivity. Rare and sensitive ecologic land units will be given higher priority than common and resistant units.

Rehabilitation of grazing sites will be prioritized based on information contained in the grazing management plans. See direction in Site Rehabilitation section.

Possible Management Methods

- Enforce compliance with grazing management plans
- •Use of news media to inform of conditions and restrictions
- Signing at trailhead

- Signing on site
- Encourage or require certain knowledge, behavior and/or equipment
- Provide grazing in certain areas
- Provide grazing during certain times of the year
- Limit duration of grazing
- Limit stock numbers
- Limit kind of stock grazed
- Contain grazing in temporary enclosures
- Discourage or prohibit overnight use
- Concentrate and channel use with facilities

Site Rehabilitation

When sites are below the standard established for campsite impacts (refer to Selway-Bitterroot Wilderness General Management Direction, 1992), and natural recovery within a reasonable time period is unlikely, rehabilitation should be considered. In some cases, specific components of a site, such as damaged trees, invite further damage and should be managed to prevent additional resource degradation.

Monitoring plans will be developed for rehabilitated sites to determine if sites are moving toward the desired condition. Necessary maintenance will be performed based on monitoring results.

Refer to previous section titled "Weeds" for specifics on managing undesirable or noxious weeds as part of a rehabilitation plan. Prioritize rehabilitation sites based on severity of impacts and ecologic land unit status and sensitivity.

Possible Management Methods

- Signing at trailhead
- Signing on site
- •Use of news media to inform of conditions and restrictions
- Restore site or components of site to prevent further degradation
- ·Boulder and downed wood placement
- Stabilize erosive soil (check dams, biodegradable erosion matting, water bars)
- Recontour and revegetate impacted areas
- Redesign and reconstruct access to site and travelways within site
- Concentrate and channel use with facilities

Glossary

Blological control agent - an organism used to control a specific plant species.

Cultural control method - seeding or planting to control a plant species.

Designated Weed Species - species that are either noxious or undesirable and are designated by Ranger Districts based on site-specific needs.

Ecologic Land Units - delineations of land and water areas that exhibit similar patterns of potential vegetation, soils, hydrology, landform, lithology, climate, and natural processes.

Endangered species - a species designated by the U.S. Fish and Wildlife Service that is in danger of extinction throughout all, or a significant portion, of its range.

Goals - timeless, yet measurable statements of the condition of the Selway-Bitterroot Wilderness (both in terms of ecological and experience conditions) that is to be achieved or maintained. Goals are expressed in broad, general terms that describe intent. There is no timeframe for achieving the goals, since the rate of implementation will vary depending on budgets and a host of other factors.

Key Areas - monitoring areas where weeds are likely to displace native plant communities and where weeds are likely to impact critical wildlife habitat, areas with differing levels of infestation, and weed-free areas.

Management Guidelines - a management method or practice that may be used by managers to achieve forest plan goals and objectives. They are operational in nature and are included to provide examples for managers.

Management Standards - a statement of management direction (requirements) that limits the discretion of managers. Adherence is mandatory and within the control of the agency. Standards are the bounds on the methods which could possibly be used to achieve the desired condition. Standards are imposed where there is a clear need to limit the discretion of managers to choose what they think might be the best actions to bridge the gap between existing conditions and desired conditions.

Minimum tool principal - a two-part analysis that is a fundamental guiding principal applied to all wilderness management decisions; 1. Is the action necessary to accomplish legitimate wilderness objectives; and 2. If the action is deemed necessary, what are the methods and equipment which will accomplish the task with least impact on the physical, biological and social characteristics of wilderness?

Monitoring and Evaluation - identification of the element(s) that will be used to track progress toward achieving the objective.

Native species - an original or indigenous inhabitant of a region as distinguished from an invader

Natural - in a state provided by nature, without human made changes; wild; uncultivated.

Natural processes - processes such as nutrient cycling, decomposition, and succession that occur without the influence or manipulation by humans.

Naturalized species - any non-native species that is genetically close or resembles a native species and one that is established ib the ecosystem as if it were a native species.

Noxious species - those plant species designated as 'noxious' by the states of Idaho and Montana.

Objectives - measures that describe the goals in resource management terms. These measures are the basis from which monitoring and evaluation schedules are developed.

Rare plants - Region 1 designated sensitive species, threatened or endangered species listed by the U.S. Fish and Wildlife Service, and Idaho and Montana state list of Species of Special Concern.

Sensitive species - those species designated by the Regional Forester for which population viability is a concern.

Threatened species - a species designated by the U. S. Fish and Wildlife Service that is likely to become an endangered species within the forseeable future throughout all, or a significant portion, of its range.

Undesirable species - those non-native plant species that aggressively displace native species and are easily transported through the Wilderness. Designation of undesirable species will be made on an ongoing basis from information collected in the field. District Rangers will make the designation in close consultation with Forest Supervisors and other agencies responsible for management and control of exotics.

Weed Free Areas - areas that are either completely free of weeds or may be free of a specific weed species.

Weeds - the term is used in this document to refer to both noxious species and undesirable species.

SECTION III - APPENDICES

APPENDIX A

MONTORING AND EVALUATION REQUIREMENTS

The table below describes monitoring components for the composite wilderness resource. Monitoring requirements for specific resources are displayed in each updated resource section. As management direction for all resources is updated, monitoring and evaluation requirements will be added

FOREST PLAN MONITORING REQUIREMENTS (36 CFR 219)

TABLE A-1

Item No.1	Actions, Effects, or Resources Measured	Expected Precision	Expected Reliability	Tolerance Limits	Reporting Time
1	Impacts of human activi- ties on the composite wil- derness resource	moderate	low	meets re- source goals	annually
2	Impacts of management activities on the composite wilderness resource	moderate	low	meets re- source goals	annually
3	Number of sites per square mile	high	high	to standard	annually (5 year rotation)
4	Number of sites at a par- ticular impact level per square mile	high	high	to standard	annually (5 year rotation)
5	Number of other parties encountered per day	low	low	to standard	annually
6	Number of other parties camped within sight or sound	hìgh	low	to standard	annually
7	Problem Areas managed to correct substandard conditions	high	high	to standard	annually
8	Identification & correction of sub-standard signing	moderate	moderate	to standard after 10 year phase out	3 - 5 years

Item No.1	Actions, Effects, or Resources Measured	Expected Precision	Expected Reliability	Tolerance Limits	Reporting Time
9	Evaluating maintenance and reconstruction project plans against management direction	high	high	all projects evaluated	annually
10	Achievement of trail main- tenance objectives	moderate	low	meets ob- jectives as funding permits	annually
11	Achievement of trail re- construction objectives	high	high meets ob- jectives		annually
12	Impacts to non-system trails	moderate	moderate	meets non- system trail goals	5 years
13	Number of landings per day	high	high	90% of the days meet standards	1-3 years
14	Number of landings per year by user type	high	high	within 10% of standard on an annual basis, or within 5% of standard for a 3 year trend	1-3 years
15	Proportion of landings by user type	high	moderate	n/a	1-3 years
16	Length of stay	moderate	moderate	n/a	3 years
17	Condition of runway sur- face and facilities	high	high	meets safe- ty stand- ards	annually
18	Change in vegetation cover on runway surface	high	high	10% deteri- oration from baseline condition	3-5 years

Item No.1	Actions, Effects, or Expected Precision		Expected Reliability	Tolerance Limits	Reporting Time	
19	Assure targeted weed ar- eas are treated and suc- cessfully eradicated or spreading reduced. Mon- itor trends of noxious weed establishment or spread.	moderate	low	meets ob- jectives	3-5 years	
20	Monitor trends of identi- fied rare plants	moderate	low	meets ob- jectives	3-5 years	

¹ Item numbers correspond with Appendix B.

APPENDIX B

Methods for Measuring or Evaluating Monitoring Requirements

The following operational guidelines may be used by managers to achieve monitoring objectives. The methodology may change over the course of time as technology improves. Therefore, these guidelines are not forest plan decisions.

- 1. Impacts of human activities on the composite wilderness resource Each year a field review will be conducted to review the effects of human activities on the wilderness resource. Situations for review will include a trail project or problem, opportunity class allocations not meeting standard, or other human-caused impacts. The review team will be comprised of Forest Service employees and Citizen Task Force representatives. The field review will rotate between each of the three forests. In addition to the formal review, Supervisor's Office staff and the Selway-Bitterroot Wilderness Coordinator will evaluate implementation and effectiveness of Forest Plan direction, as well as consistency of management across district or forest boundaries. Wilderness will be included in Integrated Resource Reviews. The Steering Group (District Rangers) will meet a minimum of twice annually to review observations and set priorities.
- Impacts of management activities on the composite wilderness resource The effects of management activities on the composite wilderness resource will be reviewed as described above.
- 3. Number of sites per square mile (indicator) Each year specific areas will be identified for monitoring. The persons assigned this responsibility will make a reasonable search for site locations, verifying previously recorded locations and noting new site locations. A "roving" square mile grid will be used to determine how many sites are located within a square mile of any given site, for that opportunity class allocation. This will be analyzed to determine whether or not existing conditions conform to LAC standards. Areas not meeting standard will be recorded in the State of the Wilderness Report.
- 4. Number of sites at a particular impact rating per square mile (indicator) Specific areas will be identified for monitoring. The persons assigned this responsibility will complete site impact worksheets for all sites within this area. A composite score reflecting all impacts will rank the site as having light, moderate, heavy, or extreme impacts. This will then be analyzed to determine whether or not existing conditions conform to LAC standards. Areas not meeting standards will be reported in the State of the Wilderness Report.
- 5. Number of other parties encountered per day (indicator) Field-going personnel will record how many other groups they encounter per day. Multiple encounters with the same group will be treated as separate encounters. This will be recorded in the Visitor Contact Record booklets. At the end of each field season this data will be tabulated and analyzed area by area, to establish whether or not existing conditions conform to LAC standards. In addition, areas where the standard threatens to be approached will be identified, and reported in the State of the Wilderness Report.
- 6. Number of other parties camped within sight or sound (indicator) When encountering a group, field-going personnel will informally ask them how many other groups were camped within sight or sound on the previous evening. The location of the camp and the number of other groups will be recorded in the visitor contact record booklets. In addition, field personnel will record observations from their own camp locations. At the end of each field season this data will be tabulated and analyzed area by area, to establish whether or not existing conditions conform to LAC standards. Areas not

meeting standard, or where the standard threatens to be approached will be identified and reported in the State of the Wilderness Report.

- 7. Problem areas managed to correct substandard conditions Each unit will report progress with managing substandard conditions annually in the State of the Wilderness Report. Successfulness of current management strategies will be reviewed, when in the field, by Resource Assistants, Forest Supervisor's Office staff, and/or the Selway-Bitterroot Wilderness Coordinator. Management may also be evaluated as a part of district field reviews, or the annual field review.
- 8. Identification and correction of sub-standards signing Districts will periodically review and update their sign inventory. New signs ordered will conform to standard. Some non-standard signs may remain for their useful life (up to ten years) if the information being provided is sufficient for meeting management objectives. Conformance with signing standards will also be identified, when in the field, by Forest Supervisors Office staff and the Selway-Bitterroot Wildemess Coordinator.
- 9. Evaluating trail maintenance and reconstruction project plans against management direction When developing plans for trail reconstruction projects or annual maintenance, districts will review the opportunity class objectives and guidelines for trails management. Application of objectives and guidelines will be documented in district files, and where applicable, in any NEPA analyses.
- 10. Achievement of trail maintenance objectives Number of trail miles receiving full maintenance (to standard) and partial maintenance are reported in the State of the Wilderness Report. Application of trail maintenance objectives will be reviewed when in the field by unit trail managers, Resource Assistants, Forest Supervisors Office staff, and/or the Selway-Bitterroot Wilderness Coordinator Application of objectives may also be evaluated as a part of district field reviews, or the annual field review.
- 11. Achievement of trail reconstruction objectives The project manager will assure compliance with trail reconstruction objectives during the project. As available, application of objectives will be reviewed in the field by Resource Assistants, Forest Supervisors Office staff, the Selway-Bitterroot Wilderness Coordinator, district field reviews, and/or the annual field review.
- 12. Impacts to non-system trails Current management of non-system trails will be reviewed by district personnel. Trails not meeting the non-system trails objective will be tracked in the State of the Wilderness Report. As available, application of objectives will be reviewed by Forest Supervisors Office staff, the Selway-Bitterroot Wilderness Coordinator, district field reviews, and/or the annual field review.
- 13 and 14. Number of aircraft landings per day/per year (indicators) This will be accomplished by visitor registration boxes and cards and electronic counters at the Moose Creek, Fish Lake, and Shearer airstrips. The data will be tabulated and used to confirm standards and analyze conformance with standards are not met, this will be recorded in the State of the Wilderness Report.
- 15. Proportion of landings by user type Proportion of landings will be identified by administrative (district business), other administrative (fires, emergency, or other administrative use), private, and commercial (outfitter related use). Methodologies might include either observer sampling or mechanical sampling. This data will be used to determine proportions per user type if use restrictions become necessary.
- 16. Length of stay per airfield landing- This will be accomplished by observation and visitor registration boxes and cards. This will be used as a tool in determining the amount of wilderness-dependent use.

- 17. Condition of runway surface and facilities Qualified aviation safety officers will inspect the runway surface and facilities for compliance with safety requirements.
- 18. Change in vegetation cover on runway surface Runway vegetative cover will be sampled to identify degree of deterioration from a baseline condition.
- 19. Assure targeted weed areas are treated and successfully eradicated or spreading reduced. Monitor trends of noxious weed establishment or spread Identification of new noxious weed populations will be a part of routine field observation and will be reported by wilderness users. Weed free areas will be identified and monitored for presence of Designated Weed Species. Species are "designated" by Districts based on site specific needs.
- Monitor trends of identified rare plants Locations of rare plants will be identified and long term monitoring protocols established to determine trends.

Forest Plan Direction (Vegetation) for the Selway-Bitterroot Wilderness ENVIRONMENTAL ASSESSMENT

September 1994

CHAPTER 1

PURPOSE AND NEED

Proposed Action

The Bitterroot, Clearwater, Lolo and Nez Perce National Forests propose to amend the Selway-Bitterroot Wilderness General Management Direction to replace Section D (Vegetation) and Section E (Forage) with a new section titled Vegetation. The General Management Direction is an appendix to the Bitterroot, Clearwater, Lolo, and Nez Perce Land and Resource Management Plans (Forest Plans).

The new vegetation section will include goals, objectives, management standards and monitoring elements that specifically address vegetation in the Selway-Bitterroot Wilderness.

Purpose of and Need for Action

The purpose of this action is to update and replace the current vegetation direction in the GMD because it does not provide specific goals, objectives or monitoring elements as required by the National Forest Management Act (36 CFR 219.11). A new vegetation section in the GMD will better address the issues of: managing noxious weeds; protecting the viability of rare plants; maintaining natural vegetative diversity; and managing pack and saddle stock grazing.

This action, by itself, does not commit resources or specify projects needed to achieve the goals or objectives stated in the proposed amendment. Site specific analysis in accordance with the National Environmental Policy Act (NEPA) will be completed prior to taking any action to implement the proposed direction.

Each of the four Forest Plans contains language directing managers to develop this kind of specific management direction for the Selway-Bitterroot Wilderness. The planning process included a broad public involvement process. Members of the public provided first hand knowledge of current conditions in the Wilderness and were provided numerous opportunities to comment on the goals and objectives as they were being written.

Scoping and Public Involvement

Notification was made on January 14, 1994 to the names contained on the Selway-Bitterroot Wilderness mailing list in addition to the four Forests' public mailing lists. A press release was also issued to local and regional media outlets on each Forest. The public was asked to comment on the proposed vegetation direction and send their comments to the Selway-Bitterroot Wilderness Coordinator by March 15, 1994.

Three responses were received. None of them were against the proposal to amend the Forest Plans. No significant issues were raised during scoping.

Appendix A contains a list of persons contacted during scoping.

CHAPTER 2

ALTERNATIVES INCLUDING THE PROPOSED ACTION

The ID Team considered two alternatives that responded to the issues raised during scoping. Alternative 1 is the No Action alternative while Alternative 2 would permit the Selway-Bitterroot Wilderness General Management Direction to be amended to add new vegetation management direction.

Alternative 1 - No Action

Section D Vegetation and Section E Forage of the Selway-Bitterroot Wilderness GMD would remain unchanged. This alternative would continue the implementation of the current Selway-Bitterroot Wilderness General Management Direction. There would be no net change in the flow of goods and services provided by the Bitterroot, Clearwater, Lolo and Nez Perce National Forests.

Alternative 2 - Amend the Selway-Bitterroot Wilderness General Management Direction with new management direction contained in the document titled "Vegetation".

This alternative would continue the implementation of the Selway-Bitterroot Wilderness General Management Direction but would add more specific management direction for vegetation. It would establish goals and objectives for vegetation within ecosystem management principals. It would provide specific management direction to address the issues of: managing noxious weeds; protecting the viability of rare plants; maintaining natural vegetative diversity; and managing pack and saddle stock grazing.

There would be no net change in the flow of goods and services provided by the Bitterroot, Clearwater, Lolo and Nez Perce National Forests. The new direction would aid managers in protecting the vegetation resources in the Selway-Bitterroot Wilderness by providing goals, objectives, standards and guidelines and monitoring elements.

CHAPTER 3

AFFECTED ENVIRONMENT

This chapter describes the existing vegetation conditions and associated habitats in the Selway-Bitterroot Wilderness.

Background

The Selway-Bitterroot Wilderness is an ecologically diverse landscape that occupies 1.3 million acres and is managed by four national forests. The diversity of the Wilderness ranges from high alpine lake communities to an arid river canyon with an array of environments in between, including old growth western red cedar communities.

Recreation and Administrative Use

Human activity in the Wilderness includes recreational backpacking, horsepacking, floating on the Selway River and flying by aircraft into airfields within the Wilderness. The fall hunting season is the time of heaviest use, with private parties and several commercial outfitters using the Wilderness. Mountain lions are hunted in the winter and black bear in the spring. Fishing occurs in Wilderness streams and high lakes throughout the summer months. Forest Service administrative activity in the Wilderness includes construction and maintenance of an extensive trail system and fire fighting activities.

Several private inholdings and airstrips as well as three Forest Service administrative sites exist within the Wilderness boundaries. There are numerous trailhead access points into the Wilderness in Montana and Idaho in addition to three airstrip portals inside the Wilderness.

Weeds

Many non native plant species have been introduced into the Wilderness. Some of them are aggressive and have displaced native vegetation. Effects of this weed encroachment may include accelerated soil erosion, reduced wildlife forage and influence on the role of natural fire in the ecosystem. Weeds of primary concern include: spotted knapweed, which occupies hundreds of acres and is common on main trails, trailheads, the Selway River corridor and other heavily used sites; Sulfur cinquefoil, which is aggressive and prominent in the main travel corridors - its spread is expected to increase; Yellow starthistle, which is very aggressive and spreads rapidly - a small population has been documented in the Idaho portion of the Wilderness; Canada thistle, which is common along trails. These species are designated noxious by the state of Idaho, the state of Montana or both. Numerous other noxious or undesirable, non-native species are also found in the Wilderness. Human caused vectors of weed introduction and dispersal into the Wilderness include people and their pack animals and dogs, livestock feed, vehicles at trailheads, and aircraft. Generally, weed populations are concentrated at trailheads, along main trails, administrative sites, outfitter camps and other areas of heavy use.

Rare Plants

Several rare plant species, also designated as sensitive, reside in the Wilderness and others have potential habitat there.

Grazing

Some sites in the Wilderness are intensively grazed by horses and mules. These areas include outfitter base camps, Forest Service administrative sites and heavily used campsites. Some of these sites are located in or near important wildlife habitat.

Dead Wood

In some areas of the Wilderness, the use of wood for campfires may have reduced the amount of dead and down wood to the extent that soil nutrients and energy cycling are affected. Little is known about the extent or effects of wood gathering.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

This chapter discloses environmental consequences or effects of implementing the alternatives. It forms the scientific and analytical basis for comparing the Proposed Action and the No Action alternatives. The environmental consequences of this action are limited because amending forest plans affects administration more than the environment. The effects of management actions or projects that are proposed to implement forest plan direction will be disclosed in site-specific environmental analyses. The effects disclosed in the each of the forest plan's Environmental Impact Statement have been reviewed. The additional management direction that is proposed by this action will not measurably change these effects.

Recreation and Administrative Use

Alternative 1 - No Action

Managers will not have guidelines for the use of native plants and seeds when rehabilitating and revegetating highly impacted recreation sites.

Alternative 2

The new direction establishes guidelines for the use seeds and plants when rehabilitating highly impacted recreation sites.

Weeds

Alternative 1 - No Action

Managers will not have measurable goals or objectives to guide them in limiting the spread of existing weeds and controlling the introduction of new weeds.

Alternative 2

Managers will have measurable objectives and standards for the control and/or containment of weeds. Priority areas for weed prevention and control will be identified based on criteria contained in the new direction. Possible management methods to contain or eradicate weeds will be evaluated based on criteria contained in the new direction.

Rare Plants

Alternative 1 - No Action

Managers will not have measurable objectives or standards to determine the viability of existing populations of rare plants. Managers will not have direction to inventory existing populations of rare plants and monitor population trends.

Alternative 2

Managers will have measurable objectives and standards that are needed to determine the viability of existing rare plant populations.

Grazing

Alternative 1 - No Action

Managers will not have guidelines for developing grazing management plants in areas of the Wilderness where recreation stock grazing impacts occur. Managers will not have measurable objectives or standards to assist them in determining the effects of recreation stock grazing on vegetation.

Alternative 2

Managers will have guidelines to use when developing grazing management plans. Managers will have measurable objectives and standards to help determine the effects of recreation stock grazing.

Dead Wood

Alternative 1 - No Action

Managers will not have measurable objectives or standards to measure the effects of firewood gathering on nutrient cycling or wildlife habitat. Areas where firewood gathering is affecting these resources will not be identified.

Alternative 2

Managers will have measurable objectives and standards to determine the effects of firewood gathering.

APPENDIX A

AGENCIES AND PERSONS CONSULTED

Board of Adams County Commissioners

Alliance for the Wild Rockies

Marty Almquist

American River Touring Assn.

American Wildlands Governor Cecil Andrus

Mort Arkava

Director, Arthur Carhart Center Jim Babb, The Solar Club Backcountry Horsemen

Peter Bahls Dennis Baird Ian Barlow

The Honorable Max Baucus

Dave Bennett Frank Beum

Forest Supervisor, Bitterroot N.F.

Arnold W. Bolle Randy Borniger Clife Bove Cheryl Bransford Doug Brede Grace Brookman

Pat Burke

The Honorable Conrad Burns

Ernest A. Busek Douglas K. Caffee Art Callan

Keith E. Carlson

Representative Mike Crapo

Rudy Carter

Chuck & Ruth Centers

Mike Chandler Marc Childress Kendall Clark Lee Clark

Forest Supervisor, Clearwater N.F. Jason & Carolyn Clinkenbeard

Liz Close Patricia Cohn David Cole

Colorado State University, The Libraries

Congressman Larry La Rocco

Rebecca Cothran

County Planning Office, Hamilton, MT

Lauretta Crabtree Senator Larry Craig Tim Craig Leo Crane

Don Crawford Bobby R. Crick Bill Cunningham Jim Curtis

Orville L. Daniels Brian Strand Lee Daniels

District Ranger, Darby Ranger District

Dan Davis, Interagency Grizzly Bear Study GP

Jim Dayton Pete Deane David Del Sordo Steve Didier

District Ranger, Missoula Ranger District

Ecology Center, Missoula, MT

Smoke Elser Helen Engle Angela Evenden John Firebaugh

Fish & Wildlife Service, Boise ID Fish & Wildlife Service, Billings, MT

Kurt Flynn Jon Foland Carey Foster Kathy & Bill Franks Gordon Frost FWL Outfitters

Archie & Eileen George

Dale Gill Tom Gionet Dale Goble

John Goffinet, Orofino Chamber of Commerce

Bill Goslin
Art Griffith
Robert Griffiths
Darin Groff
Don Habel
Robert Haggard
Robert L Halvorsen

Oats Hargett Lisa Therrell & Rich Haydon

Dave Hayes Clem Pope Dave Hemphill Kent Henderson Dave Hettinger

Tom Highland, Oregon State Aeronautical

Grangeville Air Service

Larry Hippler, State of Idaho Transportation Dept.

Bobbie Hoe, Wilderness Watch Holiday River Expeditions of Idaho

Larry Hooker Beth Horn Glen L Hower Helen Hudson

John McCarthy, Idaho Conservation League

Roger & Janice Inghram

Dean A. Lydig, Inland Northwest Wildlife Council

Norman J. James, M.D. Bennie W. James

Bruce E. Johnson, Missoula Ranger District

D. M. Johnson Richard E. Karstetter Ruth Monahan

Senator Dirk Kempthome

Stephen Knudtsen Mark Kowack David Kozub Ed Krumpe Richard Kuhl Bob Lamerson Al Latch

Donnie Laughlin Calvin B. Leman

Director, Leopold Institute Lewiston Airport Commission

Chuck Lobdell

District Ranger, Lochsa Ranger District

Lochsa River Outfitter Forest supervisor, Lolo N.F. Roy Lombardo, Hells Canyon NRA

Chris Lorentz

Dick Mangan, Missoula Technology Develop Cen

Pamela Marcum Mc Call Air Taxi John Mc Carthy Dr. Mitch Mc Claren Ritchie Mc Lean

Steve Mc Cool, Professor School of Forestry

Belle McGregor Sandy McIntyre University of Idaho Don McPherson Linda Merigliano Garry D. Merritt Patricia Millington Doris Milner

Missoula Public Library

District Ranger, Missoula Ranger District

William H. Mitchell

Elliott Moffett, Nez Perce Tribe Exec. Committee

Montana Wilderness Association Montana Wilderness Outfitters

District Ranger, Moose Creek Ranger District

Steve Morton

Steve Nadeau, Idaho Fish & Game

Forest Supervisor, Lolo N.F.

Nature Conservancy

Jeanine Nelson, Bitterroot BCH

Eugene A. Nett

Forest Supervisor, Nez Perce N.F.

Mike Nichols, Grass Roots for Multiple Use Lyn Nielson, MT. Dept of Fish, Wildlife & Parks

Richard Norris Jacey Nygaard James W. Olson Orofino Aviation John Osborn, M.D. Ralph Oswold-Dennis Palmer Todd Parker

Rod Parks & bob Van Allen

Steve Paulson, Palouse Audubon Society

Jim Peak, University of Idaho Don & Elaine Pearsons

Gary Peters Robert Peterson Pioneer Aviation

Herb Pollard, Idaho Dept of Fish & Game

Clem Pope, Payette N.F. Potlatch Corporation

District Ranger, Powell Ranger District Ravalli County Fish & Wildlife Assn

George H. Holman, Ravalli County Fish/Wildlife

Ravalli County Planning The Ravalli Republic George Reese Dwain Rennaker

Renshaw Outfitting, Inc.

Steve Rice Dave Robbins Tim Roberts John Rose

Gene Ross, Idaho Transportation Dept

Tom Ruffatto Ray Rugg James A. Russel Salmon Air Taxi

Salmon Backcountry Horsemen Nick Sanyal, University of Idaho Liese Celbsch-Dean, Sawtooth NRA John Sayles, Top Gun Springer Spaniels

Dave Schilz

Cindi Mader/Kristi Hicks, Sen. Larry Craig Office

Carolyn Durant Gus Serven John Seubert Dick Shew Sierra Club

Gloria Silva Grant Simonds Ken Smith William Snook

Gerry Snyder Paul Snyder

Julie Titone

Tony Guardalabene Ken Stauffer, Salmon N.F. Honorable Stan Stevens

District Ranger, Stevensville Ranger District

Frogg Stewart Robert Stewart Rob Strand Larry Swain Dennis A. Teal

The Wilderness Studies & Information Center

Amber and Jim Thiemens

Doug Tims

Susan M. Treu Spencer Trogdon

U. S. Bureau of Mines, Spokane, WA

Darrell Von Bargen

Dick Walker Sarah Walker

Washington Pilots Association

Rick Weholt Jack Wemple

District Ranger, West Fork Ranger District Douglas K. Caffee, West Fork Ranger Station

Duane Whipple Wilderness Aviation

Craig Gehrke, Wilderness Society Regional Forester, Missoula, MT Wildlife Outfitter/Guest Ranch The Honorable Pat Williams

Ron & Mimsi Wise Punk Folfinberger Howie Wolke

Bill Worf

Ken Wortring, Salmon N.F. Jeff Yeo, University of Idaho W. Travis & Beverly York Jennifer Zahrobsky Charlotte Zikan

INTERDISCIPLINARY TEAM

Dennis Elliott - Recreation Specialist
Mary Ann High - Wildlife Biologist
Kerry McMenus - Planner
Jim Olivarez - Noxious Weeds Specialist
Dan Ritter - Selway-Bitterroot Wilderness Coordinator

PROGRAMMATIC BIOLOGICAL EVALUATION

for

FOREST PLAN DIRECTION (VEGETATION) FOR THE SELWAY-BITTERROOT WILDERNESS

Introduction

This is a programmatic biological evaluation (BE) for an amendment to the Selway-Bitterroot Wilderness General Management Direction which is an appendix to the Bitterroot, Clearwater, Lolo and Nez Perce Forest Plans.

Species

All species currently listed as threatened, endangered and sensitive that are known to or have the potential to reside in the Selway-Bitterroot Wilderness are considered. These species are specified below in the "Potential Effects" section.

Proposed Action

The Bitterroot, Clearwater, Lolo and Nez Perce National Forests propose to amend the Selway-Bitterroot Wilderness General Management Direction to replace Section D (Vegetation) and Section E (Forage) with a new section titled Vegetation. The General Management Direction is an appendix to the Bitterroot, Clearwater, Lolo, and Nez Perce Land and Resource Management Plans (Forest Plans).

The direction includes goals, objectives and management standards to diminish the spread of noxious weeds, ensure that impacted sites are restored with native vegetation, and maintain or restore rare plant populations. Management standards set forth priorities for preventing and controlling weed populations; priorities for selecting native seed or plant propagation sources; and priorities for selecting management actions that move towards a desired condition. Monitoring indicators are identified, and Guidelines or more operational direction is provided for use in achieving the goals and objectives.

Potential Effects

The amendment will not affect threatened, endangered and sensitive species or their habitats. The nature of the amendment is to provide programmatic direction to managers. Subsequent site specific activities will be evaluated in appropriate NEPA documentation and project specific BE's,

The direction contained in this amendment is neutral toward the ecosystems in the Wilderness relative to the current Forest Plans.

The specific threatened and endangered species are listed in Table I and the evaluation in accordance with the Endangered Species Act is provided. The conclusion for all of these species is "No Effect". Sensitive species are listed in Table II and an evaluation in accordance with FSM 2670 is provided. The conclusion for these species is "No Effect".

Determination of Effects

The amendment will have no effect on any federally proposed or listed threatened or endangered species or its habitat. Formal consultation with the USDI Fish and Wildlife Service and the National Marine Fisheries is not required. There are no known significant irretrievable or irreversible commitments of resources made as a result of this action.

Table I

USDI Fish and Wildlife Service Threatened and Endangered Species

Species	Conclusion	Status
Bald Eagle Haliaeetus leucocephalus	No Effect	Threatened
Peregrine Falcon Falco peregrinus	No Effect	Endangered
Gray Wolf Canis lupis	No Effect	Endangered
Grizzly Bear Ursus arctos	No Effect	Threatened
Chinook Salmon Oncorhynchus tschawytscha	No Effect	Endangered
Howellia aquatilis	No Effect	Threatened

Table II

USDA Forest Service Sensitive Animal and Plant Species

Species	Conclusion	Status		
Boreal Owl Aegolius funereus	No Effect	Sensitive		
Trumpeter Swan Cygnus buccinator	No Effect	Sensitive		
Lynx Felis lynx	No Effect	Sensitive		
Common Loon Gavia immer	No Effect	Sensitive		
Wolverine Gulo gulo	No Effect	Sensitive		

Species	Conclusion	Status
Harlequin Duck Histrionicus histrionicus	No Effect	Sensitive
Fisher Martes pennanti	No Effect	Sensitive
Flammulated Owl Otus flammeolus	No Effect	Sensitive
Mountain Quail Oreotyx pictus	No Effect	Sensitive
Whiteheaded Woodpecker Picoides albolavatus	No Effect	Sensitive
Black-backed Woodpecker Picoides arcticus	No Effect	Sensitive
Townsend's Big-Eared Bat Plecotus townsendi	No Effect	Sensitive
Coeur d'Alene Salamander Plethodon vandykei idahoensis	No Effect	Sensitive
Spring/Summer Chinook Salmon Oncorhynchus tshawytscha	No Effect	Sensitive
Westslope Cutthroat Trout Oncorhynchus clarki lewisi	No Effect	Sensitive
Steelhead Trout Oncorhynchus mykiss	No Effect	Sensitive
Bull Trout Salvelinus confluentus	No Effect	Sensitive
Northern Bog Lemming Synaptomys borealis	No Effect	Sensitive
Adoxa moschatellina	No Effect	Sensitive
Agrostis oregonensis	No Effect	Sensitive
Allium acuminatum	No Effect	Sensitive
Allium fibrillum	No Effect	Sensitive
Allium validum	No Effect	Sensitive
Allotropa virgata	No Effect	Sensitive

Species	Conclusion	Status
Astragalus paysonii	No Effect	Sensitive
Athysanus pusillus	No Effect	Sensitive
Blechnum spicant	No Effect	Sensitive
Botrychium lanceolatum var. lanceolatum	No Effect	Sensitive
Botrychium minganense	No Effect	Sensitive
Botrychium montanum	No Effect	Sensitive
Botrychium pinnatum	No Effect	Sensitive
Botrychium simplex	No Effect	Sensitive
Calochortus nitidus	No Effect	Sensitive
Cardamine constancei	No Effect	Sensitive
Carex californica	No Effect	Sensitive
Carex hendersonii	No Effect	Sensitive
Carex livida	No Effect	Sensitive
Carex paupercula	No Effect	Sensitive
Castilleja covilleana	No Effect	Sensitive
Clarkia rhomboidea	No Effect	Sensitive
Cornus nuttallii	No Effect	Sensitive
Cypripedium calceolus var. parviflorum	No Effect	Sensitive
Cypripedium fasciculatum	No Effect	Sensitive
Dasynotus daubenmirei	No Effect	Sensitive
Douglasia idahoensis	No Effect	Sensitive
Dryopteris cristata	No Effect	Sensitive
Epipactis gigantea	No Effect	Sensitive
Erigeron asperugineus	No Effect	Sensitive

Species	Conclusion	Status
Erigeron evermannii	No Effect	Sensitive
Erigeron linearis	No Effect	Sensitive
Eupatorium occidentale	No Effect	Sensitive
Gentianopsis simplex	No Effect	Sensitive
Glossopetalon nevadense	No Effect	Sensitive
Grindelia howellii	No Effect	Sensitive
Halimolobos perplexa var. lem- hiensis	No Effect	Sensitive
Halimolobos perplexa var. per- plexa	No Effect	Sensitive
Haplopappus aberrans	No Effect	Sensitive
Haplopappus macronema var. macronema	No Effect	Sensitive
ldahoa scapigera	No Effect	Sensitive
Lesquerella humilis	No Effect	Sensitive
Lycopodium sitchense	No Effect	Sensitive
Mertensia bella	No Effect	Sensitive
Mimulus clivicola	No Effect	Sensitive
Mimulus primuloides	No Effect	Sensitive
Orogenia fusiformis	No Effect	Sensitive
Penstemon lemhiensis	No Effect	Sensitive
Saxifraga tempestiva	No Effect	Sensitive
Synthyris platycarpa	No Effect	Sensitive
Trifolium eriocephalum var. pi- peri	No Effect	Sensitive
Trifolium gymnocarpon	No Effect	Sensitive
Waldsteinia idahoensis	No Effect	Sensitive

Prepared by: Francisch

Title: Moose Creek Ranger District Wildlife Biologist

Reviewed by: Janet L. Johnson

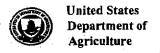
Title: Bitterroot National Forest Ecologist/Botanist

Date: 11/8/74

Date: 11/08/94

Forest Plan Amendments

1	MA8a Boundary changes in Maynard Creek	
2	Allowance for Mountain Bike Outfitting/Guiding	
3	Allowance for fire salvage in MA5 - Gird Point	
4	Roadless component of the ASQ (done by Forest, Region-wide)	
5	Cache Policy in FCRONR Wilderness (done by Forest, directed by WO (since litigated))	
6	Inclusion of Running Creek for Wild&Scenic River Study	
7	Selway Bitterroot Wilderness LAC designations	
8	Allowance for Outfitting/Guide River Permit	
9	Allowance for Boat Launch Site - West Fork	
10	Allowance for Boat Launch Site - Spring Gulch	
11	Ecosystem Restoration on Unsuitable lands	



Forest Region 6
Service Region 1
Region 4

Pacific Northwest Region Northern Region Intermountain Region

File Code: 1920/2600

Route To:

2200/2400/2300/7100

Date: December 4, 2000

Interested Parties

This letter corrects the Inland Native Fish Strategy (INFISH) Environmental Assessment (EA) for:

- Acreages for priority watersheds
- Total acreage of National Forest System lands and priority watersheds
- Area boundary for INFISH
- Percentage change in priority watersheds by management area categories with these acreage corrections.
- Priority Watershed Map

The acreages in the INFISH EA are being corrected based on more accurate mapping using Geographic Information System (GIS) of the forest and of priority watersheds. This mapping was conducted by the Key and Priority Watershed Task Team, which was formed to address specific commitments made by the Forest Service (FS) to fully implement INFISH and the "Interim strategies for managing anadromous fish-producing watersheds in Eastern Oregon and Washington, Idaho and portions of California" (PACFISH). The Key and Priority Watershed Task Team was comprised of members from the FS and Bureau of Land Management (BLM) in Oregon, Washington, Idaho and Montana. The Key and Priority Watershed Task Team was one task team founded by the Interagency Implementation Team (ITT) to implement the commitments made by the FS. As a part of their efforts, the Key and Watershed Task Team was to accurately map INFISH priority watersheds.

In starting this effort, the Key and Watershed Task Team identified two sources of information showing priority watersheds. First, after the Decision Notice for INFISH, the priority watersheds were listed in an appendix to the Implementation Plan for INFISH. It was determined that the list omitted some watersheds identified by the administrative units during the INFISH process for priority watershed designation, and it included some watersheds that had not been identified during the INFISH process as priority watersheds. Second, the INFISH Environmental Assessment (EA) provided a map of the priority watersheds (figure II-1), but it did not list or name the watersheds. The Key and Priority Watershed Task Team used GIS analysis to develop a list of watersheds from the EA map. The GIS analysis of the EA map determined the priority watershed area to be 7,440,344 acres, not the 5.5 million acres stated in the EA. In addition, the INFISH area boundary was found to be inaccurate; some Northwest Forest Plan and PACFISH watershed areas were inaccurately located in the INFISH area.



The Key and Priority Watershed Task Team reviewed the priority watershed network in order to summarize and reconcile the errors. The following criteria were used to correct the watershed network: (1) Watersheds that provide habitat for bull trout were added; (2) Watersheds that do not provide habitat for bull trout were deleted; and (3) Priority watersheds identified and located outside the INFISH area were deleted. GIS analysis found a net difference between the INFISH EA priority watershed map and a corrected map of 965,440 acres (total acres previously 7,440,344 versus acres after 8,405,784). This is a 13 percent increase in acres. These new values are the result of accurately mapping the priority watersheds from the INFISH EA map using more specific GIS tools, and correcting the map to insure that those watersheds which were intended to be included or excluded for the conservation of bull trout were properly identified (Attachment 1).

Based on the above work of the Key and Priority Watershed Task Team, a corrected priority watershed map has been developed using GIS analysis, and the following corrections/errata are made to the INFISH EA to conform to the corrected map.

INFISH EA

1. pages I-4 and II-7.

In the INFISH EA, the value of 24.9 million acres was given for the total acreage of the National Forest System (NFS) lands within the assessment area. It also states that priority watersheds occupy about 5.5 million acres or 22 percent of the assessment area. After running GIS reports and correcting the maps for priority watersheds, it was determined that the total acreage of NFS lands was approximately 24.8 million acres, and the priority watershed area was 8.4 million acres which comprises 34% of the assessment area.

- ✓ See EA page I-4
 - change 24.9 million acres to 24.8 million acres.
- ✓ See EA page II-7
 - change 5.5 million acres to 8.4 million acres.
 - change 24.9 million acres to 24.8 million acres.
 - change 22 percent to 34 percent.

2. Page II-10, figure II-1

- ✓ See EA page II-10.
 - replace this page with the enclosed figure II-1.

3. Page III-35.

Table III-2 in the INFISH EA displayed the percentage of acreage within priority watersheds by Management Area Categories (MACs) under Alternatives B, D, and E.

The following table displays the original and corrected percentages within priority watersheds by MACs.

Categorial #4	Se Il co				1000	1.50 16 1.50 P		
Original	29	2	28	1	38	2	0	0
Percentages								
in Table III-2						·		1.1
of the	,							
INFISH EA			:					
Corrected	26	2	26	0	44	2	0	0
Percentages				_				

The INFISH EA stated that over 60 percent of the acreage in the INFISH EA is in MACs 1 through 4. These MACs represent the lease amount of management intensity. Category 5 represents the area that will require the most modification (38%). The corrected watersheds comprise 54 percent of the acreage in MACs 1 thru 4. Category 5 was increased from 38 percent to 44 percent.

Additionally, the INFISH EA identified the total area for priority watersheds to be 5.5 million acres. The corrected acreage is 8.4 million.

✓ See EA page III-35

- change percentages in Table III-2 with the corrected percentages displayed above.
- change 60% of the acreage is in MACs 1 through 4 to 54%.
- change 5.5 million acres to 8.4 million acres.

In determining whether supplementation or revision of the INFISH EA is needed, we considered the following:

- (1) The correction is consistent with the intent and effect of the 1995 decision:
 - a. INFISH was intended to provide programmatic mitigation measures for potential environmental effects that may result from future projects and activities.
 - b. The intended effect of INFISH was to maintain the environmental status quo while long-term management strategies are being developed.
- (2) The correction does not substantially alter the estimates of effects projected in the EA:
 - a. The environmental assessment projected most beneficial effects would be minimal or would not be apparent during the interim period (INFISH EA, III-15).

- b. This effect is not altered by correcting the acreage estimate.
- c. The EA identified adverse social and economic effects from the selected alternative. These projected effects were considered to be minor or inconsequential since the INFISH strategy is interim. Given the interim nature of the strategy and the minor acreage change resulting from the acreage reconciliation, the effects are expected to be essentially unchanged.
- d. Applying the requirements for Priority Watersheds to these watersheds should not have substantially different effects on the affected environment. Priority watershed designation increases the buffer widths for intermittent stream channels from 50 to 100 feet on each side of the stream. However, the actual effects of this change would likely be much less since all watershed additions to the priority watershed network have a federally listed fish species and Endangered Species Act consultations for projects occurring in watersheds with listed fish species would likely result in protections greater than those afforded by the Priority Watershed designation.

We reviewed the needed corrections to the EA, and considered them in relation to the environmental consequences disclosed in the INFISH EA and the purpose and need for INFISH. As a result, we have concluded that these corrections do not constitute significant new circumstances or information relevant to environmental concerns and bearing on the selected action or its disclosure to environmental impacts. Consequently, we have determined that no need to supplement or revise the INFISH EA exists.

/s/ Mike Edrington (for)

(for) HARV FORSGREN Regional Forester Region 6 /s/Kathleen A. McAllister

DALE BOSWORTH Regional Forester Region 1

/s/Jack G. Troyer (for)
JACK A. BLACKWELL
Regional Forester
Region 4

Enclosures

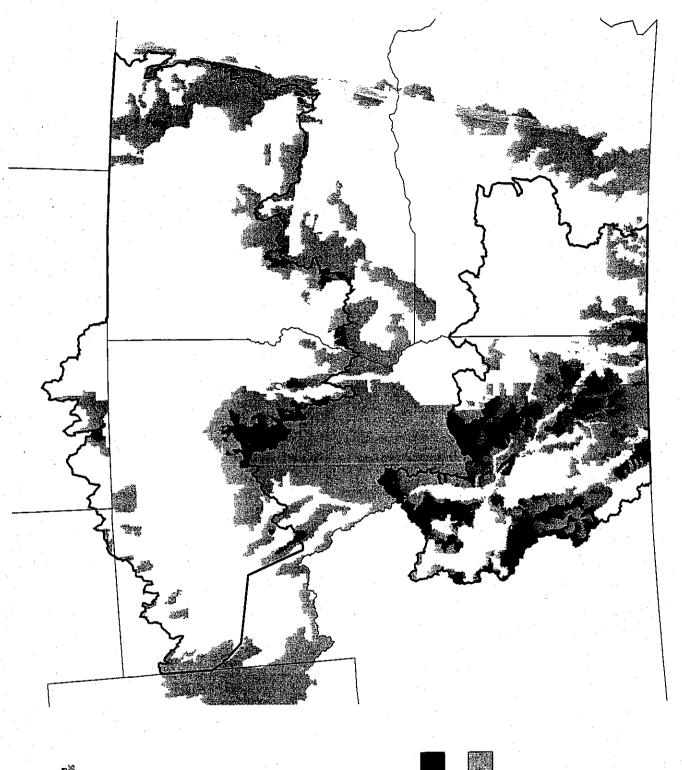


Figure II-1.

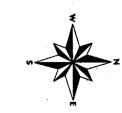
Priority Watersheds
Within INFS

National Forests

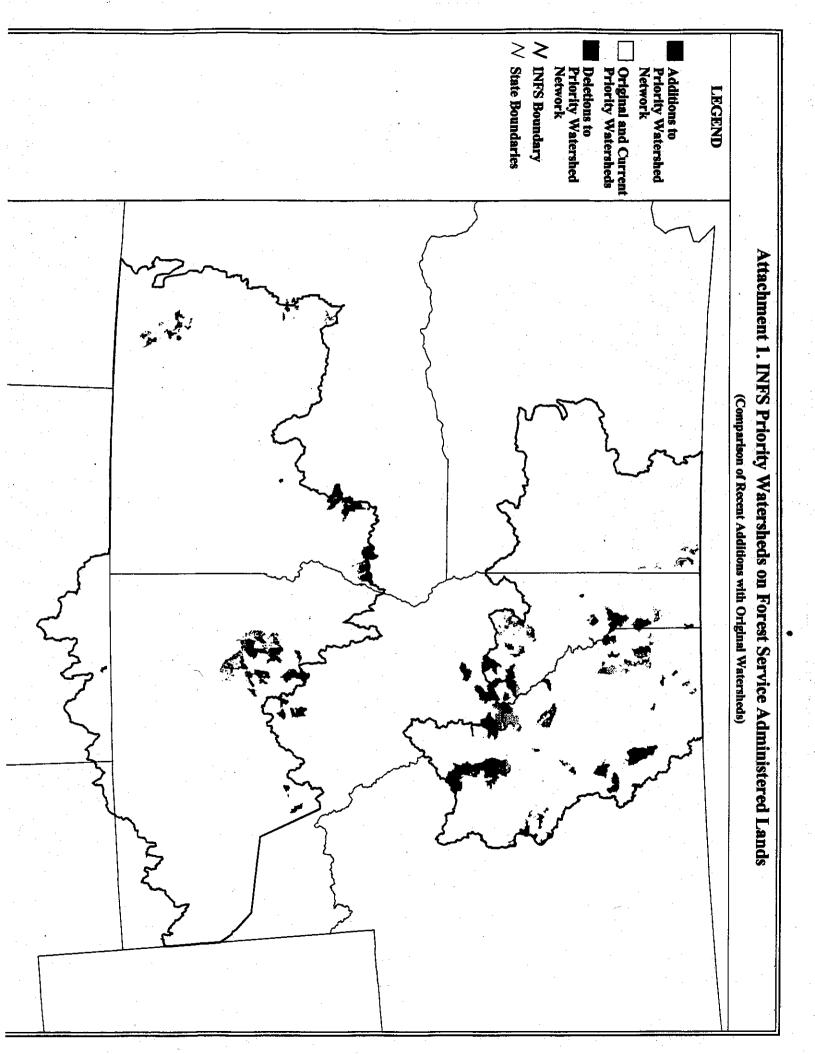
Priority Watersheds



Scale 1:~5,450,000

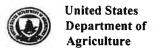


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Forest Service Region 6 Region 1 Region 4 Amendment 12.5

Pacific Northwest Region Northern Region Intermountain Region

File Code: 1920/2600

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Date: December 4, 2000

Interested Parties

This letter corrects the Inland Native Fish Strategy (INFISH) Environmental Assessment (EA) for:

- Acreages for priority watersheds
- Total acreage of National Forest System lands and priority watersheds
- Area boundary for INFISH
- Percentage change in priority watersheds by management area categories with these acreage corrections.
- Priority Watershed Map

The acreages in the INFISH EA are being corrected based on more accurate mapping using Geographic Information System (GIS) of the forest and of priority watersheds. This mapping was conducted by the Key and Priority Watershed Task Team, which was formed to address specific commitments made by the Forest Service (FS) to fully implement INFISH and the "Interim strategies for managing anadromous fish-producing watersheds in Eastern Oregon and Washington, Idaho and portions of California" (PACFISH). The Key and Priority Watershed Task Team was comprised of members from the FS and Bureau of Land Management (BLM) in Oregon, Washington, Idaho and Montana. The Key and Priority Watershed Task Team was one task team founded by the Interagency Implementation Team (ITT) to implement the commitments made by the FS. As a part of their efforts, the Key and Watershed Task Team was to accurately map INFISH priority watersheds.

In starting this effort, the Key and Watershed Task Team identified two sources of information showing priority watersheds. First, after the Decision Notice for INFISH, the priority watersheds were listed in an appendix to the Implementation Plan for INFISH. It was determined that the list omitted some watersheds identified by the administrative units during the INFISH process for priority watershed designation, and it included some watersheds that had not been identified during the INFISH process as priority watersheds. Second, the INFISH Environmental Assessment (EA) provided a map of the priority watersheds (figure II-1), but it did not list or name the watersheds. The Key and Priority Watershed Task Team used GIS analysis to develop a list of watersheds from the EA map. The GIS analysis of the EA map determined the priority watershed area to be 7,440,344 acres, not the 5.5 million acres stated in the EA. In addition, the INFISH area boundary was found to be inaccurate; some Northwest Forest Plan and PACFISH watershed areas were inaccurately located in the INFISH area.



The following table displays the original and corrected percentages within priority watersheds by MACs.

Category	4.1	2	1.3	4 4 1	80 S	· 法 6 期中	19/2017	1008510
Original	29	2	28	1	38	2	0	0
Percentages								
in Table III-2								
of the								
INFISH EA								
Corrected	26	2	26	0	44	2	0	0
Percentages								

The INFISH EA stated that over 60 percent of the acreage in the INFISH EA is in MACs 1 through 4. These MACs represent the lease amount of management intensity. Category 5 represents the area that will require the most modification (38%). The corrected watersheds comprise 54 percent of the acreage in MACs 1 thru 4. Category 5 was increased from 38 percent to 44 percent.

Additionally, the INFISH EA identified the total area for priority watersheds to be 5.5 million acres. The corrected acreage is 8.4 million.

✓ See EA page III-35

- change percentages in Table III-2 with the corrected percentages displayed above.
- change 60% of the acreage is in MACs 1 through 4 to 54%.
- change 5.5 million acres to 8.4 million acres.

In determining whether supplementation or revision of the INFISH EA is needed, we considered the following:

- (1) The correction is consistent with the intent and effect of the 1995 decision:
 - a. INFISH was intended to provide programmatic mitigation measures for potential environmental effects that may result from future projects and activities.
 - b. The intended effect of INFISH was to maintain the environmental status quo while long-term management strategies are being developed.
- (2) The correction does not substantially alter the estimates of effects projected in the EA:
 - a. The environmental assessment projected most beneficial effects would be minimal or would not be apparent during the interim period (INFISH EA, III-15).

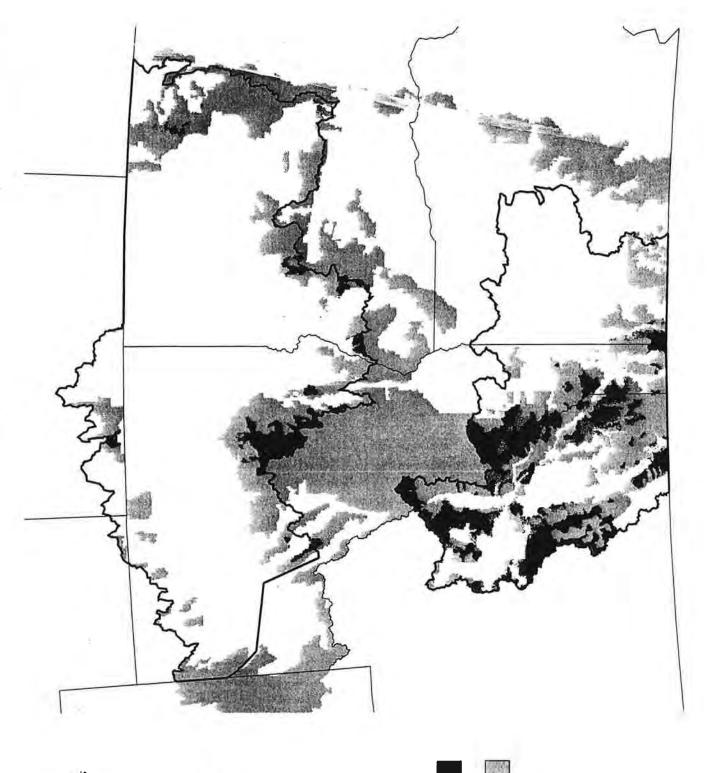
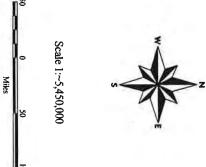
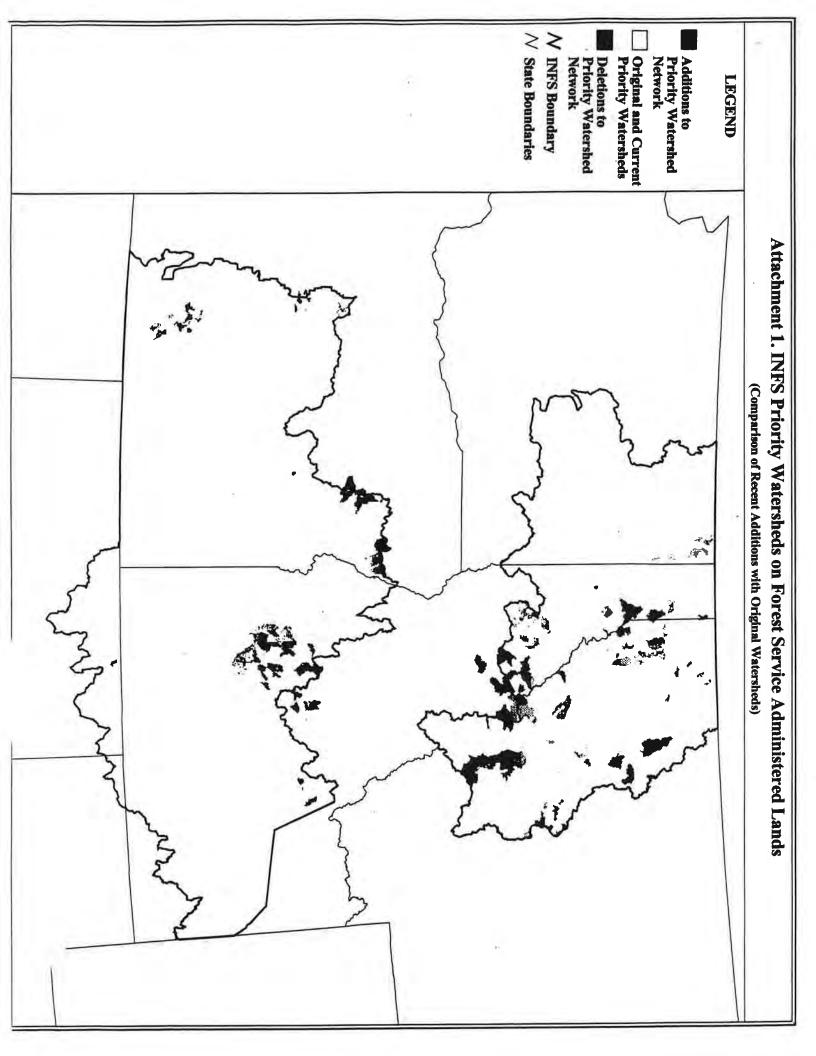


Figure II-1.

Priority Watersheds
Within INFS

National Forests
Priority Watersheds





FOREST PLAN AMENDMENT

Bitterroot National Forest Land and Resource Management Plan Amendment 12
Clearwater National Forest Land and Resource Management Plan Amendment 12
Lolo National Forest Land and Resource Management Plan Amendment 21
Nez Perce National Forest Land and Resource Management Plan Amendment 19

Specific changes to the Selway-Bitterroot Wilderness General Management Direction include:

- 1. Replace the 'Table of Contents' with 'Table of Contents revised 1/96'
- 2. Replace Chapter D, "Vegetation" (existing Page D-1) with the new Chapter D, "Vegetation", Pages D-1 through D-12.
- 3. Replace Chapter E, "Forage" (existing pages E-1 through E-2) with the new Page E-1.
- 4. Replace "Appendix A" (existing Pages Appendix A-1 through A-2) with the new "Appendix A", Appendix Pages A-1 through A-3.
- 5. Replace "Appendix B" (existing Appendix Pages B-1 through B-2) with the new "Appendix B", Appendix Pages B-1 through B-3.

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D. VEGETATION

Goals:

Vegetation is composed of native plant communities that represent the natural diversity of the Selway-Bitterroot Wilderness ecosystem in composition (kinds and amounts of vegetation), structure (arrangement of vegetation), and function (processes like succession, decomposition and nutrient cycling).

Vegetative diversity and processes are maintained by natural disturbances such as fire, wind, avalanches, and insects and disease.

New noxious weed populations are eradicated. Existing undesirable and noxious weed populations are geographically contained and are not increasing.

Viability of rare plant populations is maintained or is restored if human impacts have adversely affected them.

In areas of concentrated human use, wildlife habitat and natural processes such as nutrient cycling are not adversely affected by the use of standing and down dead wood.

Grazing of pack and saddle stock does not adversely affect native plant and animal populations, water quality, soil conditions, or other wilderness values.

Objectives:

New populations of noxious weeds identified in the Wilderness will be eradicated.

Percent cover of designated weed species in Key Areas will decrease or remain stable from year to year.

Designated weed species will not occupy Weed Free Areas.

Resource conditions will meet individual grazing management plan standards.

All known rare plant populations will be monitored to ensure that self-sustaining populations are maintained.

Management Standards:

Priority areas for prevention and control of weed populations will be where weeds threaten to spread into Weed Free Areas, boundaries of existing weed populations targeted for containment, and areas critical to plant and animal species habitat.

Methods used in the eradication or containment of noxious or undesirable weed populations will be designed to have no significant adverse effects to native plant or animal populations or natural processes. Manual and cultural removal of weeds will be evaluated first and given preference over the use of herbicides and biological control methods. Introduction of approved biological control agents will only be allowed if the agent is host specific. Site specific environmental analyses will be conducted prior to initiating control methods.

Management Guidelines:

Inventory and Classification

Vegetation management efforts will primarily focus on maintaining natural processes and a landscape mosaic within the range of natural variability. However, elements such as rare plants, alpine lakes, hot springs and other special features will be given individual attention in vegetation inventory, classification, and mapping efforts.

A vegetation classification and mapping strategy will be used in conjunction with the Selway-Bitterroot Wilderness Opportunity Class map to help determine acceptable levels of human use in areas based on ecologic considerations. The classification will also provide the framework for identification of potential species habitat.

Ecologic land units will be mapped in the Wilderness to describe areas of different biological and physical potentials that define the limits or range of existing and future ecologic conditions. Important landscape features such as vegetation patterns and habitat linkages will be identified. This information, in combination with inventories of existing vegetation, wildlife, and human aspects, will facilitate an ecological approach to wilderness planning and management.

Fire

Fire is a primary force in sustaining natural composition, structure and function in the Selway-Bitterroot Wilderness ecosystem.

Existing conditions and natural conditions will be identified and compared to establish management needs. Where fire suppression activities have disrupted natural processes, discontinuing suppression should be considered.

Threatened, endangered and sensitive plant and animal species habitat will be addressed in all fire management planning.

Insects and plant pathogens

Native insects and disease have an important role in maintaining natural ecosystem processes (ie. energy/nutrient cycling, wildlife habitat) by killing and defoliating vegetation.

Insects and disease function differently in disturbed ecosystems. Long term fire suppression can create artificially large insect and disease populations. Therefore, outbreaks that originate on disturbed lands may have an unnatural influence in wilderness.

When unnatural outbreaks on adjacent lands threaten natural processes in wilderness, control measures should be initiated outside the Wilderness. Native insect and disease outbreaks originating in the Wilderness will be allowed to fulfill their role whenever possible. Management of insect and disease populations, that have the potential to spread across administrative boundaries, will be evaluated site specifically and negotiated between adjacent ownerships.

education, and cooperative efforts. Opportunities for outfitters to help control weeds in their areas of operation will be explored. The areas in which outfitters can help control weeds, and the methods to be used to control weeds, will be the result of a mutual agreement between the outfitter and District Ranger. This agreement will be formalized in the outfitter's operating plan prior to each season of operation. Typical areas that outfitters can provide assistance with weed control are assigned campsites, base camps, spur trails accessing outfitter camps, and stock holding areas.

Hunter information and education will also be accomplished through coordination with state wildlife agencies. Pilot organizations and agency air operations personnel will be included in these efforts. Other user groups, organizations, and individuals will be included in education programs.

The message will convey both the goals of vegetation management and appropriate prevention practices to avoid transportation of weeds by people, stock, dogs, vehicles and aircraft. Education messages will address pre-trip, portal, and wildemess travel practices and weed identification.

Possible Management Methods

The following management methods are not decisions in this plan but serve as a menu of possible actions for managers. They are not an exhaustive list nor do they preclude other actions not listed. They are ranked from least restrictive to most restrictive.

For preventing new introductions:

- •Educate all users, particularly stock users and pilots, encouraging preventative practices.
- •Initiate cooperative agreements with adjacent land owners or managers
- Eradicate aggressive species from portal areas or boundary areas
- •Require the use of certified weed free feed.

For retaining identified weed free areas:

- ●Educate all users, particularly stock users and pilots, encouraging alternative practices
- Contain introduced species to areas outside the weed free areas
- Eradicate introductions into the weed free areas
- Require the use of certified weed free feed

Rare Plants

There is little information documented on the status of rare plants in the Selway-Bitterroot Wilderness. There are several known Forest Service designated 'sensitive' species in the Wilderness and others that have potential habitat there. Little monitoring has been done on these populations.

All human activities will be managed to protect and recover rare plants. Management of federally designated threatened, endangered and sensitive species and State Species of Special Concern will be conducted in cooperation with state and federal agencies in accordance with recovery plans.

Potential habitat for rare plant species will be identified during area analyses and project planning. Biological evaluations and assessments will be conducted for proposed and existing activities that may affect rare plants.

- •Discourage or prohibit camping on certain sites or locations
- Concentrate and channel use with facilities
- Remove damaged features
- •Enforce CFR 261.9 a. which prohibits damaging any natural feature or other property of the United States.

Standing and down dead wood

Snags and downed wood play an important role in maintaining natural processes. The dead wood component contributes to functions such as nutrient and energy cycling and wildlife habitat. Dead wood is commonly used for firewood by Wilderness visitors. In some high use areas, long-term absence of dead wood can have a significant impact on site productivity. This impact is of primary concern in areas that represent unique plant and animal habitats. The impact of fire wood gathering in campsites may not be significant in the context of the entire 1.3 million acre Wilderness. However, the impact of extensive fire wood gathering in relatively unique habitats (eg. high-mountain lake basins) can be significant. The effects may be especially important when considering the total acres within the SBW that have similar vegetation and habitat charactersitics.

In heavily used camp areas including administrative sites, monitoring will be conducted to assess dead wood retention. The amount of dead wood retention will be evaluated by comparing impacted sites with unimpacted sites in comparable vegetation community types. Monitoring results can be used in implementing management strategies to maintain or restore dead wood functions where necessary.

Assessment and Inventory Needs

Little information has been gathered about the current condition relating to dead and down wood. Before any management actions are taken to address impacts from wood gathering, managers will need to assess the current situation and analyze effects in the context of similar habitat types across the SBW and impacts to plants and animals that depend on those habitats. Monitoring indicators need to be selected and monitoring protocols developed. Some possible indicators of down dead wood retention include:

1) Distance necessary to travel from campsite to obtain firewood; 2) Percent volume or size of down wood retained at a site; 3) Percent or size of snags retained at a site; 3) Number of snags or logs inhabited by wildlife.

Possible Management Methods

The following management methods are not decisions in this plan but serve as a menu of possible actions for managers. They are not an exhaustive list nor do they preclude other actions not listed. They are ranked from least restrictive to most restrictive.

- •Use of news media to inform of conditions
- Signing at trailhead
- Signing on site
- •Encourage or require use of alternative fuel source in designated areas
- Close identified sites to snag cutting
- Close identified sites to downed wood gathering

- Production/utilization studies
- Condition/trend benchmarks
- Visual examinations

Management objectives will be developed within the grazing management plans based on ecologic land unit type.

The following is a menu of possible monitoring indicators that could be used to measure progress toward achieving the management objectives:

Species composition and density, forage production, forage utilization, riparian condition, time of year site is grazed, length of time site is grazed, soil condition, salt containment, type of stock, number and behavior, competition with wildlife for forage, displacement of wildlife, potential threatened, endangered and sensitive species habitat.

Displacement of or competition with threatened, endangered and sensitive animal and plant species, and other species that may be affected, will be addressed in the grazing management plan.

Priority for establishing grazing management plans will be based on ecologic land unit status and sensitivity. Rare and sensitive ecologic land units will be given higher priority than common and resistant units.

Rehabilitation of grazing sites will be prioritized based on information contained in the grazing management plans. See direction in Site Rehabilitation section.

Possible Management Methods

The following management methods are not decisions in this plan but serve as a menu of possible actions for managers. They are not an exhaustive list nor do they preclude other actions not listed. They are ranked from least restrictive to most restrictive.

- •Enforce compliance with grazing management plans
- •Use of news media to inform of conditions and restrictions
- Signing at trailhead
- Promote the use of supplemental weed free feed
- Signing on site
- Concentrate and channel use with facilities
- Provide grazing in certain areas
- Provide grazing during certain times of the year
- •Limit duration of grazing
- Limit stock numbers
- Limit kind of stock grazed
- Contain grazing in temporary enclosures

Site Rehabilitation

When sites are below the standard established for campsite impacts (refer to Selway-Bitterroot Wilderness General Management Direction, 1992), and natural recovery within a reasonable time period is unlikely, rehabilitation should be considered. In some cases, specific components of a site,

Definition of Forest planning terms used in this document

Goal: A concise statement describing a desired end result and normally expressed in broad general terms.

Objective: A statement describing measurable desired resource conditions, or ranges of conditions, intended to achieve forest plan goals.

Management Standard: A limitation on management activities that is within the authority and ability of the agency to meet or enforce.

Management Guideline: A description of a preferred or advisable course of action.

Monitoring and Evaluation: Identification of the element(s) that will be used to track progress toward achieving the objective.

Natural - in a state provided by nature, without human made changes; wild; uncultivated.

SECTION III - APPENDICES

APPENDIX A

MONTORING AND EVALUATION REQUIREMENTS

The table below describes monitoring components for the composite wilderness resource. Monitoring requirements for specific resources are displayed in each updated resource section. As management direction for all resources is updated, monitoring and evaluation requirements will be added.

FOREST PLAN MONITORING REQUIREMENTS (36 CFR 219)

TABLE A-1

Item No.1	Actions, Effects, or Resources Measured	Expected Precision	Expected Reliability	Tolerance Limits	Reporting Time
1	Impacts of human activities on the composite wilderness resource	moderate	low .	meets re- source goals	annually
2	Impacts of management activities on the composite wilderness resource	moderate	low	meets re- source goals	annually
3	Number of sites per square mile	high	high	to standard	annually (5 year rotation)
4	Number of sites at a par- ticular impact level per square mile	high	high	to standard	annually (5 year rotation)
5	Number of other parties encountered per day	low	low	to standard	annually
6	Number of other parties camped within sight or sound	high	low	to standard	annually
7	Problem Areas managed to correct substandard conditions	high	high	to standard	annually
8	Identification & correction of sub-standard signing	moderate	moderate	to standard after 10 year phase out	3 - 5 years

Item No.1	Actions, Effects, or Resources Measured	Expected Precision	Expected Reliability	Tolerance Limits	Reporting Time
19	Assure targeted weed areas are treated and successfully eradicated or spreading reduced. Monitor trends of noxious weed establishment or spread.	moderate	low	meets objectives	3-5 years
20	Monitor trends of identi- fied rare plants	moderate	low	meets ob- jectives	3-5 years

¹ Item numbers correspond with Appendix B.

APPENDIX B

Methods for Measuring or Evaluating Monitoring Requirements

The following operational guidelines may be used by managers to achieve monitoring objectives. The methodology may change over the course of time as technology improves. Therefore, these guidelines are not forest plan decisions.

- 1. Impacts of human activities on the composite wilderness resource Each year a field review will be conducted to review the effects of human activities on the wilderness resource. Situations for review will include a trail project or problem, opportunity class allocations not meeting standard, or other human-caused impacts. The review team will be comprised of Forest Service employees and Citizen Task Force representatives. The field review will rotate between each of the three forests. In addition to the formal review, Supervisor's Office staff and the Selway-Bitterroot Wilderness Coordinator will evaluate implementation and effectiveness of Forest Plan direction, as well as consistency of management across district or forest boundaries. Wilderness will be included in Integrated Resource Reviews. The Steering Group (District Rangers) will meet a minimum of twice annually to review observations and set priorities.
- 2. Impacts of management activities on the composite wilderness resource The effects of management activities on the composite wilderness resource will be reviewed as described above.
- 3. Number of sites per square mile (indicator) Each year specific areas will be identified for monitoring. The persons assigned this responsibility will make a reasonable search for site locations, verifying previously recorded locations and noting new site locations. A "roving" square mile grid will be used to determine how many sites are located within a square mile of any given site, for that opportunity class allocation. This will be analyzed to determine whether or not existing conditions conform to LAC standards. Areas not meeting standard will be recorded in the State of the Wilderness Report.
- 4. Number of sites at a particular impact rating per square mile (indicator) Specific areas will be identified for monitoring. The persons assigned this responsibility will complete site impact worksheets for all sites within this area. A composite score reflecting all impacts will rank the site as having light, moderate, heavy, or extreme impacts. This will then be analyzed to determine whether or not existing conditions conform to LAC standards. Areas not meeting standards will be reported in the State of the Wilderness Report.
- 5. Number of other parties encountered per day (indicator) Field-going personnel will record how many other groups they encounter per day. Multiple encounters with the same group will be treated as separate encounters. This will be recorded in the Visitor Contact Record booklets. At the end of each field season this data will be tabulated and analyzed area by area, to establish whether or not existing conditions conform to LAC standards. In addition, areas where the standard threatens to be approached will be identified, and reported in the State of the Wilderness Report.
- 6. Number of other parties camped within sight or sound (indicator) When encountering a group, field-going personnel will informally ask them how many other groups were camped within sight or sound on the previous evening. The location of the camp and the number of other groups will be recorded in the visitor contact record booklets. In addition, field personnel will record observations from their own camp locations. At the end of each field season this data will be tabulated and analyzed area by area, to establish whether or not existing conditions conform to LAC standards. Areas not meeting standard, or where the standard threatens to be approached will be identified and reported in the State of the Wilderness Report.

19. Assure targeted weed areas are treated and successfully eradicated or spreading reduced. Monitor trends of noxious weed establishment or spread - Identification of new noxious weed populations will be a part of routine field observation and will be reported by wilderness users. Weed free areas will be identified and monitored for presence of Designated Weed Species. Species are "designated" by Districts based on site specific needs.

20. Monitor trends of identified rare plants - Locations of rare plants will be identified and long term monitoring protocols established to determine trends.

Land and Resource Management Plan

Amendment 13

October 23, 1995

Amend Bitterroot National Forest Plan (September, 1987) to add:

MA1, Chapter III-5, 3.e.(10)

(10) Lands unsuitable for timber production will not be scheduled for timber harvest except for salvage sales, sales necessary to protect other multiple use values, or activities that meet other objectives on such lands if the Forest Plan establishes that such actions are appropriate. (NFMA 36 CFR 219.27(C) (1)). The Forest Plan establishes that such actions are appropriate for 174 acres located in portions of Units 2,3, 10, 12, 24, 28, and 29 of the Beaver Woods Vegetation Management Project in the proximity of Sections 16, 21, 26, 29, 32, 34 and 35 T3S, R22W and Section 5 T4S, R22W on the West Fork Ranger District.

END OF AMENDMENT

Land and Resource Management Plan

Amendment 14

June 27, 1996

Amend Bitterroot National Forest Plan (September, 1987) to add:

MA1, Chapter III-18, 3,e(8)

Lands unsuitable for timber production will not be scheduled for timber harvest except for salvage sales, sales necessary to protect other multiple use values, or activities that meet other objectives on such lands if the Forest Plan establishes that such actions are appropriate. (NMFA 36 CFR 219.27(C)(1)). The Forest Plan establishes that such actions are appropriate for unsuitable portions of Units 4, 8, and 24 of the Warm Springs Project in the proximity of Sections 7 and 18, T.1N., R.19W. and sections 12 and 13, T.1N., R.20W. on the Sula Ranger District.

END OF AMENDMENT

Land and Resource Management Plan

Amendment 15

June 25, 1997

Amend Bitterroot National Forest Plan (September, 1987) to add:

MA8b, Chapter III-62, 3.h.(1)

(1) Public ownership of this management area will not be reduced and important winter ranges will be considered for addition to public ownership by exchange or purchase (Appendix L.) The following parcels as listed and described in the Decision Notice for the Federal Land Exchange (FLEX) dated 7/97 are exceptions to the above standard and disposal of winter range is allowed due to a greater land management benefit:

French Basin #4	130	acres of MA 8b
French Basin #5	40.74	acres of MA 8b
Blind Draw	40	acres of MA 8b

END OF AMENDMENT

Land and Resource Management Plan

Amendment 16

August 12, 1997

Amend Bitterroot National Forest Plan (September, 1987) to add:

Forest Wide Management Direction, Chapter II-21, F.2.e.(14)

(14) Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyion, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built. Third order drainages 03K-313-3 and 03K-314-2 on the Sula District will be managed for 47 and 40 percent level of elk habitat effectiveness, respectively.

END OF AMENDMENT

Land and Resource Management Plan

Amendment 17

June 25, 1997

Amend Bitterroot National Forest Plan (September, 1987) to add:

See attached map for Management Area boundary relocations.

III. Management Area Direction, Chapter III-2, A, Table III-1

See attached page for changes in Management Area acres.

MA3a, Chapter III-15, 1.

About 103,189 acres of Management Area 3a are in the visually sensitive foreground

MA5, Chapter III-36, 1.

Management Area 5 contains 232,683 acres of semiprimitive recreation and elk......

MA10, Chapter III-69, 1.

Management Area 10 contains 1606 acres of developed recreation sites on the Forest.

MA10, Chapter III-70, 3.b.(1)

(1) The visual quality objective of developed sites, adjacent areas, and access corridors is retention (USDA), 1977). The visual quality objective for Lost Trail Ski Area is modification.

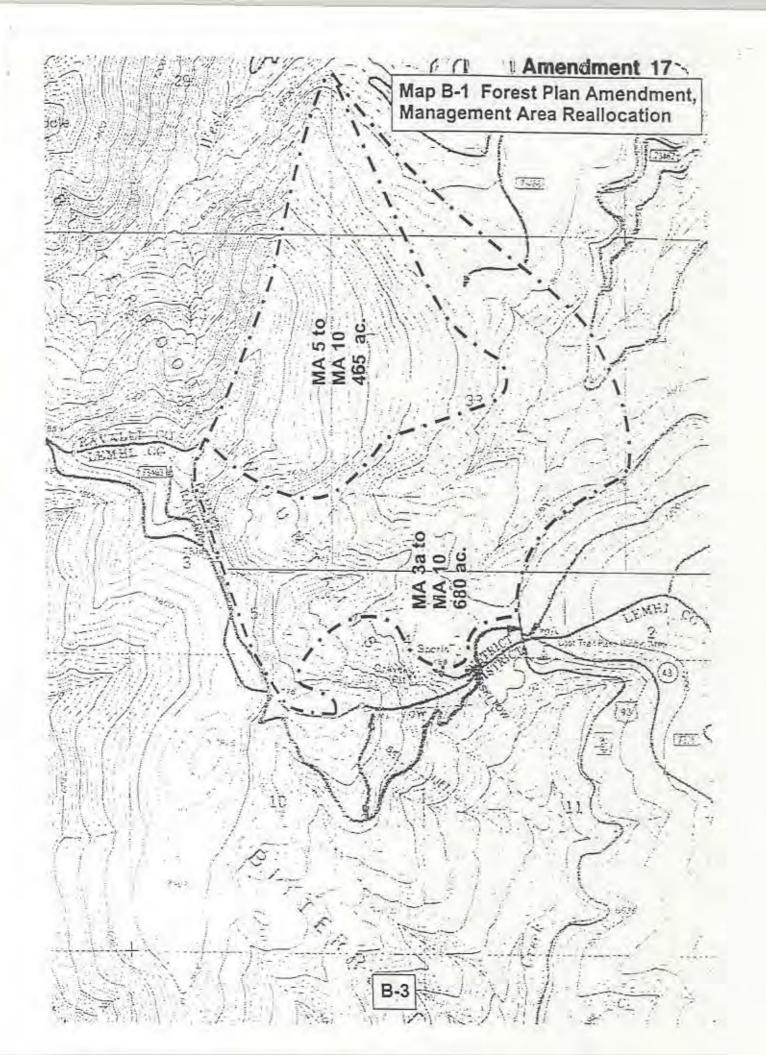
END OF AMENDMENT

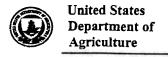
Amendment 17

Table III-1 Management Area Assignment

A CONTRACTOR OF THE PARTY OF TH	A			Subtotal	
Management Area	Suitable Timberland	Management Area Acres	Percent of Forest	Acres	Percent
1	162,797	194,089	12		
2	109,506	128,785	2		
3a	70,911	103,189	7		
3b	41,452	50,431	8 7 3		
3c	5,154	7,027	<1	483,521	30
5		232,683	15	232,683	15
6		76,805	5		
7a		41,162	5 3 12		
76		193,703	12		
7c		*508,217	32	819,887	52
8a		25,949	2		
8b		9,499	<1		
9		488	<1		
10		1606	<1		
11a		4250	<1		
3a, 3	ed within MA 1, c, 5 & 8a				
11c - Locat	ed within MA 3a			41,792	3
Гotal		1,577,883	100	1,577,883	100

^{*} September 30, 1986 edition of "Land Areas of the National Forest System" shows 511, 997 acres for the Bitterroot portion of the Selway- Bitterroot Wilderness.





Forest Service Beaverhead-Deerlodge National Forest

Date: May 10, 1999

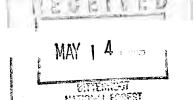
Wisdom Ranger District

File Code: 2320/1950

Route To:

Subject: Anaconda Pintler Plan Revision - EA for Comment

To: Anaconda Pintler Wilderness Managers



Attached for your review and comment is the Environmental Assessment for the Anaconda-Pintler (AP) Wilderness Plan with a brief abstract that outlines the key features of the preferred alternative on the back of this page. The preferred alternative was identified by the Interdisciplinary Team and the line officers at an April 11, 1997 meeting in Wisdom. This alternative attempts to strike a balance which maintains the status quo in terms of how the A-P looks and feels. It improves resource and social conditions where possible without being highly restrictive.

We would like to reach a final decision on the future management of the Anaconda-Pintler this fall. A press release will be sent out this week as well as EAs for comment to those who responded to the initial scoping. A letter informing 577 individuals that the A-P EA is available for comment will also be mailed this week.

We have asked folks to respond by July 15th, 1999. The project file is housed in Wisdom but comments can be given to any of the members of the IDT team listed below and they will forward the comments on to us here.

Deb Gale Wisdom Ranger District PO Box 238 Wisdom, MT 59761 (406) 689-3243

Bill Sprauer Philipsburg Ranger District P.O. Box 805 Philipsburg, MT 59858 (406) 859-3211

Judith Fraser West Fork Ranger District 6735 West Fork Road Darby, MT 59829

Paul Olson Wise River Ranger District P.O. Box 100 Wise River, MT 59762

Thank you for your attention to this and your interest in the future of the Anaconda-Pintler Wilderness.

Sincerely,

DENNIS HAVIG District Ranger



Environmental Assessment May 1999

Forest Plan Direction for the Anaconda-Pintler Wilderness Beaverhead-Deerlodge and Bitterroot-National Forest

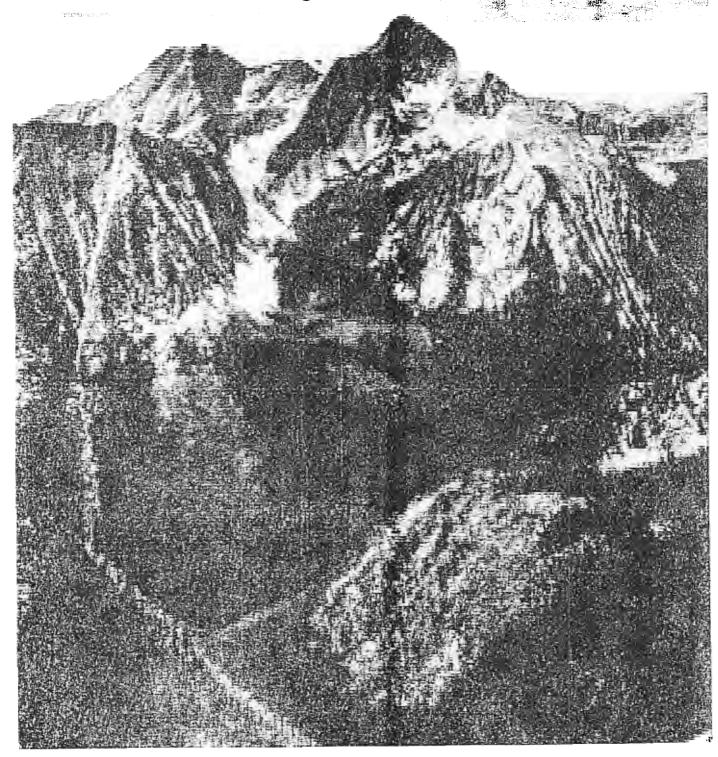


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Vicinity Map

Goat Flat RNA

East Fork Bitterroot RNA

MANAGEMENT ZONE MAPS

Alternative A - No Action

Alternative B

Alternative C

Alternative D&E

CHAPTER I - PURPOSE AND NEED

Introduction

Wilderness Management direction for Anaconda-Pintler Wilderness, (A-P) is being updated for the respective Forest Plans, (Beaverhead, Bitterroot, Deerlodge). It will revise the Anaconda-Pintler Wilderness Plan (1977) as it was appended to those plans. Wilderness direction has not been updated for 20 years. The 1977 plan said it would be updated every 10 years. The proposed direction guides management activities and establishes management standards for the Wilderness. It describes management practices which will maintain or restore wilderness integrity. Updated direction includes goals, objectives, standards, guidelines, monitoring and evaluation requirements. However, the rate of implementation and management activities are dependent on the annual budgeting process.

As part of this analysis the Northern Regional Forester is proposing to formally establish two Research Natural Areas (RNA's) which are either wholly or partially contained within the Anaconda-Pintler Wilderness. (See proposed Action 5, page 7.)

The A-P covers 159,086 acres located along the Continental Divide in southwestern Montana. A vicinity map is attached. The area is fairly high in elevation with much of the crest above 9,000 feet. Elevations range from 5,400' on the East Fork of the Bitterroot, to 10,793' on West Goat Peak. Annual precipitation, varying from 40-60", combines with complex geology and diverse topography to produce an array of vegetation which in turn supports many wildlife species.

With designated Wilderness status, the Anaconda-Pintler has significance as a special area for future generations. It also has a functional role as part of a larger landscape.

Purpose And Need

The goal of wilderness management is to preserve wilderness values. Current Forest Plans do not recognize differing conditions throughout the Wilderness nor do they provide specific guidelines for determining resource trends and acceptable conditions. Amended direction will define an acceptable range of desired resource and social conditions through identification of zones as described in the attached narrative and tables. New direction for the A-P is necessary because of increased use, cumulative effects of increasing numbers of people and new issues and current threats to wilderness quality. These are described more fully under Proposed Actions.

Management will reflect the character of the A-P and its history as an outstanding example of this nation's wildlands. The intention of this updated direction is to

maintain the quality of this area despite pressures of growing recreation use and other human induced changes.

Proposed Actions

The Proposed Actions were developed from an evaluation of the existing conditions of the A-P, public comments, and management concerns. The proposed actions are premised upon Desired Future Condition which is described in Chapter I-page 12.

The Proposed Actions are

- 1. To manage increasing recreation use by identifying zones and prescriptions which reflect acceptable use levels and the degree of impact allowed for each area;
- 2. To set guidelines for responding to new requests for outfitter and guide permits as well as requests for increased "user days" from existing outfitters;
- 3. In full cooperation with Mt. Fish, Wildlife and Parks, determine which lakes and streams are appropriate for stocking with indigenous species and which should not be stocked.
- 4. To identify management direction for treating noxious weeds;
- 5. To establish the proposed Research Natural Areas (RNA's) on Goat Flat and the East Fork of the Bitterroot:
- 6. To change management direction for Mystic Lake Cabin; and
- 7. To change monitoring requirements

The Proposed Actions are discussed more fully below.

Proposed Action 1 - Establish Recreation Use Zones and Prescriptions

Purpose and Need for Action 1

Population growth and increasing demand for wilderness experiences are impacting the A-P. Western Montana is growing at a rapid rate. Pressure on most wildlands, nationwide, is increasing. The Anaconda-Pintler is not an exception to this trend. Currently, individuals and groups from all over the nation are coming to the Anaconda-Pintler because it "has not been discovered". One of the primary things that people seek when they come to the Anaconda-Pintler is an experience where they "seldom, if ever, see anyone in another party".

Use is gradually increasing as population grows and more people discover the A-P. Increasing numbers of groups use the area. These include boy scouts, church groups, educational groups and various institutional groups. Groups, whether outfitted or not, need larger sites. Any group often causes increased social and physical impacts in an area.

Zones are established based on the desired wilderness condition. They reflect the levels of acceptable change in given areas and focus strategies to prevent unacceptable conditions. These strategies include various preventative measures which may help maintain wilderness quality even with increasing wilderness use.

Recreational use inevitably creates some impacts. Measurable indicators which reflect these impacts are campsite density, loss or alteration of vegetation around campsites, encounters with other users, etc. These indicators are listed in Table I, Chapter II, page 55. Standards, guidelines, goals and objectives relate to these indicators. These desired conditions are also described in the narrative description of Zones I-IV, Chapter II-Pages 36-42. The amount of impact acceptable differs within each zone.

If goals, objectives, and standards, stated in Chapter II, are not being met then new restrictions or management actions that correct specific shortcomings may have to be taken. This is discussed further in Chapter II - starting on page 28, Actions Common to all Action Alternatives in the Vegetation and Recreation sections under Goals, Objectives and Guidelines.

Proposed Action 2 - Outfitter and Guide Special Use Permits

Purpose and Need for Action 2.

Numerous requests are received from individuals or organizations that want to outfit and guide in Wilderness. Because of the nature of the A-P, there is limited capacity and little

A-P specific need for outfitting. This plan will provide guidelines for responding to requests from prospective outfitters.

The Anaconda-Pintler is a relatively small, easily accessible wilderness. It is long and narrow in configuration with most points being accessible in a day from the nearest trailhead. It is in good condition and has ample opportunity for solitude. Scoping tells us that the public wants to keep it much like it is. Current use includes people from all over the nation as well as those from local communities.

Reported use days by all but one existing outfitter are lower than their priority use days. Currently some outfitters provide "traditional", stock-supported opportunities for hunting and fishing as well as stock oriented or stock supported summer travel. Other outfitters guide backpacking trips. To date there have been no outfitter services requested during the winter.

The Forest Service has received very few requests from the public asking for an outfitter to take them into the Anaconda-Pintler. The A-P can be readily used by those with basic skills and equipment. Day use is prevalent in a number of areas.

A time and dollar cost is associated with permit administration. Often, neither time nor money is ample to administer permits.

Purpose and Need for Action 3 - Develop Fish Stocking Within the Wilderness

In full cooperation with MT. Fish, Wildlife and Parks, determine which lakes and streams are appropriate for stocking with indigenous species and which should not be stocked.

It is recognized that stocking fish in waters in the Anaconda-Pintler has altered the natural biological community in many of the lakes and streams. The practice was established before the 1964 Wilderness Act. Although it is not supported by everyone, stocking is a traditional practice and supports a traditional use. There is a need to address the direct and indirect effects of fish stocking and to take action to minimize adverse impacts. The intent is to move the wilderness toward more natural conditions where possible and manage fish stocking so that it reflects wilderness values.

Proposed Action 4 - Prevention and Removal of Noxious Weeds

Use a variety of methods, (chemical, biological and physical) to eliminate spread of noxious weeds in the Anaconda-Pintler, including treatment of areas such as trailheads which threaten to spread weeds into the Wilderness.

Purpose and Need for Action 4

Noxious weeds are showing up in isolated spots in the Wilderness. They are prevalent in some trailhead areas and on approach roads, particularly on the Bitterroot side of the Wilderness. The A-P is a core area of virtually unmodified land between modified lands. Settlement accompanied by timber harvest, agriculture and subdivision of lands have changed the Bitterroot Valley and its surroundings. The valley is infested with noxious weeds. The Wilderness forms a barrier between the Bitterroot and the Big Hole Valley, the latter being comparatively weed-free. The A-P connects with the large wild areas of the Sapphire Mountains to separate the Bitterroot from Flint Creek and Upper Rock Creek as well. Neither Flint Creek or Rock Creek has substantial development or the same degree of weed infestation as exists in the Bitterroot Valley. Noxious weeds have the potential to drastically change the wilderness. Direction will help prevent weeds from gaining a foothold as they have in adjacent areas and other wildernesses.

Proposed Action 5. Establish Research Natural Areas (RNAs)

The Northern Region Regional Forester proposes to designate two Research Natural Areas (RNAs) either wholly or partially contained within the Anaconda-Pintler Wilderness (Maps II and III). A decision to establish these RNAs would amend Forest Plans for the Bitterroot and the Deerlodge National Forests to reflect these areas are established RNAs. Establishment Records for each of the RNAs, along with management direction for the Anaconda-Pintler Wilderness, would be implemented as the guiding management direction for each area. Establishment Records are consistent with the broader direction found in Forest Service Manual (4063), Regional Guide, and Forest Plans.

Decision to be Made

The decisions to be made concerning the two Research Natural Areas are: 1) whether or not to designate each of the proposed areas; 2) and if so, what changes or amendments, are required to be made to the Forest Plans, and 3) if amendments are determined necessary, whether or not they are significant. Each of the two areas will be considered individually. The Regional Forester could decide to designate both RNAs, or one, or neither.

Purpose and Need for Action 5

Research Natural Areas are part of a national network of ecological areas designated in perpetuity for research and education and/or to maintain biological diversity on National Forest System lands. The proposed Research Natural Areas were identified by the Forest Service Northern Region and Intermountain Research Station through studies of areas that represented target plant communities for addition to the national network. Current NEPA analysis requirements for RNA establishment will be accomplished via this Environmental Assessment.

During the original Forest Planning Process (mid 1980s) the Bitterroot and Deerlodge National Forests identified these two proposed RNAs in their Forest Plans. There now exists a need to formally establish these areas per Forest Plan direction and direction contained in Forest Service Manual 4063.

The purpose of designating these RNAs is to provide for their long-term protection and recognition, and to contribute to the national network of areas of important forest, shrubland, and grassland types, as well as other plant communities, that have special or unique characteristics of scientific interest and importance.

The Bitterroot and Deerlodge National Forest Plans contain a section on "Research Natural Area Objectives," which essentially states,"...(the identified) types were assigned in the 1983 Northern Region Guide as the Forests's objectives for Research Natural Area establishment." The Forests generally identified and proposed representative areas in the Forest Plans for meeting the assigned targets, and have standards to protect the values of these areas. Field surveys and verification were conducted and Establishment Records prepared for each proposed area.

This EA tiers to, and is consistent with, the above planning process, the 1983 Regional Guide, and both National Forest Plans. Therefore, issues of scale, and extent or representation of natural features, across the entire Northern Region are not reanalyzed, nor repeated here.

The proposed RNAs were identified for designation through Regional and Forest level planning based on their representative and/or unique natural and ecological features. They were identified in the last planning processes to become part of a designated system of areas with a management goal of maintaining their natural condition and features for use in non-manipulative research, as well as for baseline comparison and observation (FSM 4063).

The Goat Flat RNA was originally proposed at 150 acres in the Forest Plan. This current proposal has been expanded to 1376 acres of National Forest System Land for the purpose of including a broader representation of alpine, subalpine, and endemic plant habitats. The proposed Goat Flat RNA encompasses 679 acres within Wilderness and 697 acres outside of Wilderness. The East Fork proposed RNA is wholly contained within the Anaconda-Pintler Wilderness and the boundary remains the same as proposed in the original Forest Plan, approximately 298 acres.

Proposed Action 6 - Change Management Direction for Mystic Lake Cabin

Purpose and Need for Action 6

The 1977 Wilderness Direction specified that the Mystic Lake Cabin was not essential for administration of the Wilderness and would be phased out over a five year period and evaluated for it historical value. If there was no historical value the cabin would be phased

out. Further analysis has determined that the Mystic Lake Cabin has cultural significance. It is no longer appropriate that the cabin be phased out without steps being taken to try to protect the structure. This proposed action will establish management guidelines for the cabin that recognize it's cultural value and provide appropriate levels of fire protection.

Proposed Action 7 - Change Monitoring Direction

Purpose and Need for Action 7

New monitoring guidelines are needed to see if Wilderness condition is as described in desired future condition. Monitoring activities listed in the 1977 Anaconda-Pintler Wilderness Management Plan and individual Compartment Prescriptions will continue to be monitored. This plan will set up new guidelines on how we will do monitoring. Specific indicators that will be monitored include campsite density, barren core area, number of social trails, encounters, administrative and/or permitted camps, noxious weeds, campfire closures, resource protection facilities, stock access (trail) and containment (hitch rails), Forest Service system trails, non-system trails, trail signs, fish stocking (indigenous species), existing grazing allotments, outfitter/guide activities and amount of use, recreational use zones and existing and new regulations.

SCOPE OF THE PROPOSED ACTIONS AND ANALYSIS

The purpose of this environmental analysis is to evaluate proposed actions that are programmatic in nature. That is, the management direction set forth in this document provides a general framework within which project activities or protective measures may be implemented. Subsequent NEPA analysis or management decisions may be made at more site specific levels to implement the direction. This direction does not repeat guidance which is already contained in existing laws and policies. Examples of such laws are the Wilderness Act (P.L. 88-577), Appendix 1, which provides overall direction for all Wilderness activity; the Threatened and Endangered Species Act which provides direction for the protection and recovery of listed plant and animal species, and the Clean Water Act which sets water quality standards. In addition, existing Federal Regulations (CFR's) are not included in this guidance.

This proposed direction does not describe the methods, the "how to", or the schedule of implementing the direction nor does it describe the day-to-day or operational actions to be carried out in the management of the A-P. A Wilderness Operating Plan, when completed, will give details for on-the-ground operations to insure uniform and consistent administration of this direction. This direction will amend the current Forest Plans. Those portions of the 1977 A-P Plan not replaced by this updated direction will be incorporated into the updated operating plan, see Appendix II.

OFFICIALS RESPONSIBLE FOR DECISIONS

The responsible officials for this Environmental Analysis. (EA), are the Forest Supervisors of the Beaverhead-Deerlodge National Forest and the Bitterroot National Forest. The Regional Forester is responsible for establishing Research Natural Areas, (FSM 4063.01) and deciding if visitor registration and/or a permit will be required (FSM 2323.04c 1).

Based on the analysis in this EA, three levels of decisions must be made:

- 1. The Forest Supervisor will decide which direction is appropriate and which needs to be added, if any, to the Forest Plans to ensure that the Anaconda-Pintler Wilderness is managed to preserve its wilderness character. This 'programmatic' level of decision will either amend management direction for the Beaverhead, Deerlodge and Bitterroot Forest land and Resource Management Plans, Units MA 9, MA B1, MA 7a, respectively, based on one of the action alternatives or continue existing management (No Action Alternative). Amendments will be consistent with laws, regulations, policies, and forest Plan direction. "Opportunity Classes" in the Beaverhead Forest Plan will be replaced by zones.
- 2. The Forest Supervisors must issue special orders which will support the programmatic decision which is selected. This will involve such things as group limit and campfire closure areas.
- 3. The Regional Forester must decide what type, if any, permit will be required
- 4. The Regional Forester has the authority to establish RNA's. The decision to be made is whether or not the proposed Goat Flat and East Fork (Bitterroot) RNA's should be established as RNA's and if so, how they should be managed.

DESIRED CONDITIONS FOR THE ANACONDA-PINTLER WILDERNESS

Significance of the Area

Much of the Anaconda Range was originally designated as a Primitive Area in 1937 due to its outstanding physical and biological characteristics (Regulation L-20, October 2, 1937). It was designated as "Wilderness", December 13, 1962 under U-1 regulations signed by the Secretary of Agriculture. The area was classified as an "instant" Wilderness with the passage of the September 3, 1964 Wilderness Act and is now a unit of the National Wilderness Preservation System.

Early documents show the area was designated as Wilderness because of its rugged, scenic beauty, pristine condition, and "almost complete absence of man's influence." Since the '30's, when it was established as a primitive area, the Anaconda-Pintler has been recognized for its importance to wildlife, water resources, outstanding scenery and backcountry recreation.

The Anaconda-Pintler is a narrow mountain range along the Continental Divide in southwestern Montana. With designated acreage at 159,086, it is relatively small by western Wilderness standards. The area is fairly high in elevation with much of the crest and eastern section above 9,000 feet. Elevations range from the 5,400' willow flats on the East Fork of the Bitterroot to the rock and snow summit of West Goat Peak at 10,793'.

An array of vegetation exists because of complex geology, diverse topography, and annual precipitation variation which ranges between 40 to 60". The vegetative spectrum varies with elevation and available moisture. Sagebrush, extensive willow flats, ponderosa pine, Douglas fir, lodgepole pine, and spruce comprise much of the lower elevation vegetative mosaic. These blend into aspen, subalpine fir, whitebark pine, and subalpine larch as the elevation increases. Small wet meadows are found in many locations. This diverse plant life supports varied wildlife populations which include mountain goat, elk, moose, deer, bear, mountain lion, and wolverine as well as many smaller mammals and birds. Native west-slope cutthroat and bull trout are found in some streams. Lakes have cutthroat or non-native rainbow planted over the years.

The high elevation zone is characterized by bare, lichen-covered talus slopes, tarns, and snowfields. Solifluction lobes and terraces, rock polygons, and stone stripes are of particular interest. Alpine vegetation communities represented are: grassland, cushion plant, snowbed, both dry and wet slope, and wetland communities. Relatively large stands of sub-alpine larch and whitebark pine are found at higher elevations. The whitebark pine varies from large healthy trees up to 36" in diameter to mixed age stands. Although there is some sign of blister rust there is little mortality to date. In high basins and along ridges there are areas where whitebark occurs in stands of krummholz form. Many whitebark snags remain from the bark beetle infestation of the 30's. Limber pine is also present on limestone outcroppings in the north east portion of the Wilderness.

There are two proposed RNA's listed in the respective Forest Plans. The East Fork of the Bitterroot and Goat Flat. These RNAs enhance the research and biodiversity conservation values of the Wilderness by providing additional recognition for the significant ecological features of these areas.

Headwaters of the Big Hole, Upper Clark Fork (Rock Creek), and Bitterroot Rivers, all important cold water fisheries and irrigation sources, lie within the Anaconda-Pintler. The Wilderness takes its name from the Anaconda Mountain Range and Charles Ellsworth Pintler, a Big Hole Valley settler of the late 1800's.

The narrow configuration of the wilderness makes even its high elevation central section readily accessible. The integrity of the area is intact because it is rugged and because, historically, it has not been near a population center.

The A-P runs basically west to north-east while most mountain ranges in the vicinity are north-south in orientation. Biologically, it functions as corridor, divider, security area, reference area, and gene pool. The area allows examination of relatively undisturbed ecological processes over long temporal and large spatial extents. The Anaconda-Pintler is a core area of virtually unmodified land between lands modified by humans. The Anaconda-Pintler connects with the large wild areas of the Sapphire Mountains to separate the Bitterroot Valley from the Flint Creek, Upper Rock Creek and the Big Hole valleys. None of these have substantial development. The Big Hole is virtually weed free and modified primarily by agriculture with some timber harvest around the fringe. The A-P is in close proximity to other large wild areas such as Trail Creek, Allen Mountain, West Big Hole, and the West Pioneers.

Desired Future Condition

The intent of the proposed management direction, including goals, objectives, standards and guidelines, is to help move toward the desired future condition. The following paragraph is a description of the desired future condition for the Wilderness.

The A-P is characterized by a predominantly unmodified natural environment where ecological processes operate without interference. Wilderness characteristics as they relate to process (function), appearance (structure), and composition (elements) of the ecosystem(s) within the Wilderness are maintained. Noxious weeds are not present.

There is opportunity for a high quality "wilderness experience" which includes solitude, adventure, risk, self-reliance and primitive forms of recreation. The area feels and looks wild to those who visit. Human activity and associated stock use does not unduly displace wildlife, substantially alter natural vegetative communities, substantially disturb or compact soil. Air and water quality retain a high level of purity. Heritage resources are protected.

Management Philosophy

The 1964 Wilderness Act provides general direction for managing wilderness and protecting wilderness values. The Act states that wilderness areas "...secure for the American people of present and future generations the benefits of an enduring resource of wilderness...unimpaired for future use and enjoyment." It further states that Congress intended to manage these wildernesses so that "...the earth and it's community of life are untrammeled by man..." Wilderness is defined as "retaining it's primeval character and influence..." and it "...appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; has outstanding opportunities for

solitude or a primitive and unconfined type of recreation...."and "may also contain ecological, geological, or other features of scientific, educational, scenic or historical value."

Document Organization

The following narratives briefly describe the organization and content of this EA:

Chapter II - describes issues and the five alternative ways (including no action) of addressing or resolving environmental issues related to this proposal. The four action alternatives wholly or partially meet the purpose and need for the proposal, as described in this chapter. The alternatives are displayed so that a comparison can be made of the environmental impacts of each.

Chapter III - discusses those portions of the existing conditions that may be affected by the alternatives. The location, existing condition, history and desired future condition are described for the resources affected.

Chapter IV - discloses the environmental consequences of implementing the alternatives, using the descriptions in Chapter III as the baseline for measurement. Direct, indirect, and cumulative effects are discussed.

Literature Cited and References

List of Preparers - lists the individuals who prepared this EA.

Glossary

Appendices - contain key supporting documentation.

Maps

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CHAPTER II - ISSUES AND ALTERNATIVES

Introduction

This section describes the range of Alternatives considered, including the proposed action. The Alternatives respond in various ways to the significant issues. As stated in Chapter I the intention of this action is to maintain the quality of the A-P despite pressures of growing recreation use and other human induced changes. Forest Plan direction for the A-P has not been updated for 20 years.

Scoping And Public Involvement Process

Many meetings and discussions have taken place to decide what issues and concerns need to be addressed to maintain the quality of the A-P. An Interdisciplinary Team (ID team) was formed during the preliminary analysis and has conducted this environmental analysis. Those involved with wilderness management, line officers, forest planners, and various specialists have participated in discussions and reviews which have provided input to the analysis.

Public involvement has taken place in a number of ways. There have been several mailings, one during the preliminary analysis and two during the NEPA analysis. Mailing lists are composed of individuals, organizations, outfitters and guides, local government and local business representatives. Written and oral comments have been received in response to these mailings. Comments on wilderness registration cards, wilderness ranger reports and questions and comments to receptionists have also been noted and considered.

THE ISSUES

As a result of the scoping effort, the public and Forest Service personnel raised a number of concerns. These are grouped into the following issues. The issues influenced how alternatives were formed.

Issues Identified but Eliminated from Further Consideration

The following issues will not be analyzed in this EA either because they are already mandated by law or they are outside the scope of the analysis.

• Changes in the boundaries of the A-P. The boundaries of Wilderness areas are established by Congress. Potential additions to the A-P are addressed in the current Forest Plans.

- Buffers around the A-P. Management of adjacent lands is already addressed by Management Areas in the respective Forest Plans.
- The reintroduction of predator species and hunting and fishing regulations in the A-P. Reintroduction of wildlife species is determined by Montana Fish Wildlife and Parks and U.S. Fish and Wildlife Service. Hunting and fishing are permitted in the A-P under regulations of the State of Montana.
- Current levels of funding. While the Forest Service has some discretion, Congress allocates funding annually. This is not under local control and is outside the scope of this analysis.

Fire. Management of natural ignitions is addressed in the Fire Management Action Plan for each Forest. This document was updated with 1993 Fire Management Guidelines for the Anaconda-Pintler. Fire frequency is being monitored to determine if these guidelines are successfully returning fire to the landscape within the natural range of variability. Management ignited fire will not be addressed in this document.

- Air and water quality influenced by air pollution. An air quality monitoring plan (1995 A-P AQRV Plan) is in place. Monitoring for the Class I Airshed will continue. The Forest Service is responsible for communicating the conditions of the selected Air Quality Related Values to the State of Montana, Department of Environmental Quality. The State agency is responsible for the enforcement of the Clean Air Act.
- Access and Trailheads. These issues will not be addressed by this document but will be part of the travel plan updates for the respective forests.

INDICATORS

Indicators are used to compare alternatives. In the case of Management Zones indicators are specific variables which can be measured to assess the described conditions. The objectives and standards for these indicators were developed as the maximum limits of change, to serve as a "red flag" when unacceptable conditions are being approached or exceeded. When these standards or objectives are approached management actions need to be taken.

Description of Indicators

Campsite Density, Barren Core Area, and Social Trails are connected to both biophysical and social impacts. All these indicators occur, to varying degrees, in areas where moderate amounts of camping and day use take place. Vegetation, soils, and wildlife habitat, are all influenced if campsites become too dense or too impacted or if

there is a proliferation of social trails. An area looks and feels less wild if it has numerous impacted use sites and social trails.

Studies by the Intermountain Research Center, (Cole, 1993) emphasize the problem of campsite proliferation and recommend various strategies for addressing it. Those strategies are incorporated in various management actions recommended in action alternatives of this document.

- Encounters are a direct measure of social impacts and are indirectly related to many bio-physical impacts. For most people, the wilderness experience is diminished if they encounter a large number of other people. The Wilderness Act defines wilderness as a place which has "outstanding opportunities for solitude." Frequent human presence also has the negative effect of displacing or taming wildlife.
- Administrative and Permitted Camps tend to be large camps and often are of relatively long duration or have repeated use. Since size, duration, and frequency of use contribute to greater social and bio-physical impacts, administrative actions which control these camps and limit size, duration and frequency are desirable.
- Permanent Structures fall into three major categories: 1) Heritage Resources are considered part of the value of wilderness. 2) Trail related structures such as waterbars, turnpikes, and puncheons, prevent resource damage including erosion, mudholes, tread braiding, etc. 3) Structures such as hitching racks or toilets tend to concentrate use and impacts, on one hand, but may prevent impacts that are more severe or widespread. Any structure makes an area seem less natural and also has the potential of changing use patterns which may or may not be desirable. The Wilderness Act defines Wilderness as an area "without permanent improvements".

FS System Trails and Non-System Trails both change the wilderness character of an area bio-physically and socially. Trails directly influence how much and what kind of use an area receives. Thus, administrative decisions regarding trails have long term effects on the wilderness.

- Signs have a direct influence on how wild an area feels and the challenge of wilderness travel.
- Fish Stocking has a direct influence on the species mix in an area and on the recreation experience. It also has indirect effects if people adjust their use according to whether or not a given lake has fish.
- New Regulations such as lower group limits, campfire closures, stock restrictions, permit requirements and access changes influence both the social experience and the resource condition.

- Consistent Guidelines for Outfitters and Guides relating to new permits and user days are defined.
- ♦ Noxious Weeds are prevented and eliminated.

Issues Used To Develop Alternatives

The issues that the ID Team believed to be most significant and that were used to develop alternatives are discussed below, along with the indicators used to gauge an alternative's response to the issue. The indicators are used to compare the alternatives in this chapter and are key to illustrating the alternatives in the tables.

Issue 1: Human activity is affecting vegetation, soils and the natural appearance of the A-P in areas of concentrated use

Human activity is affecting vegetation, soils and the natural appearance of the A-P along trails, in campsites, and on lakeshores. Most of the A-P still appears natural. Wider use of "Leave No Trace" techniques and the efforts of wilderness rangers have actually improved the condition of some areas. New regulations over the years have also helped change use patterns and the resulting impacts.

In other places, impacts are increasing in severity and/or proliferating. These changes occur because of multiple factors. In some places, crowding itself makes an area seem less natural.

Some changes may have small scale bio-physical impacts on wildlife habitat, water quality, natural diversity, natural processes and other important components of wilderness. Vegetation is sometimes obliterated or the vegetative composition in a given area changed as a result of human activity. Soils may become compacted and no longer support vegetation. Lack of vegetation increases erosion and sediment deposition. Water run-off or puddling may increase as may wind erosion. Though some changes are primarily in appearance, they still make an area seem less wild and this diminishes the wilderness experience.

When people use stock more impacts on vegetation and soil may occur. Impacts may include increased trampling, vegetation utilization, scarred trees, soil compaction and erosion.

Indicators for this issue include:

Campsite Density Barren Core Area Social Trails Encounters

Administrative and Permitted Camps

Permanent Structures

FS System Trails and Non-System Trails

Issue 2: Elements of the wilderness experience--solitude, adventure, discovery, freedom and challenge are adversely influenced by increasing recreation use

Increased use diminishes the opportunity for solitude. People need to work harder to find it. As people are displaced from some areas and move into others the cycle of increased social and bio-physical impacts in more remote areas continues. Places where solitude used to be virtually guaranteed become more and more utilized by individuals who are displaced from other areas with increasing use.

Adventure and discovery are diluted if numerous other people frequent a trail or a destination area. Challenge decreases if cross-country travel makes routes obvious.

Encounter levels are specified for each zone. These indicators address social aspects of the wilderness experience directly and some bio-physical impacts indirectly.

Indicators for this issue include:

Campsite Density

Encounters

Administrative and Permitted Camps

FS System Trails and Non-system Trails

Signs

Permanent Structures

Issue 3: Management actions, ways of managing human use, influence elements of the wilderness experience in the A-P

Often, administrative actions change the wilderness experience. They influence the feeling of solitude, challenge, freedom, spontaneity or control. Management actions involve trade-offs. More official presence, more facilities, and/or more regulations all change people's experience of "wild". With increased use, management actions are necessary to protect aspects of wilderness. Depending on an individual's point of view, some actions may seem more intrusive than others. What is acceptable to one individual or group, may be objectionable to another. Possible administrative actions involve changes in group limit, (size of groups allowed), mandatory permits, (self-issued or agency issued), a quota system, campfire closures, camping restrictions, facilities such as hitch rails or toilets, access

changes, a requirement to pack feed, etc. These types of management actions are simply different ways to minimize human impact on the wilderness.

Indicators for this issue include:

New Regulations , (such as Group Size Restrictions, Permit Requirements, Campfire Closures , Access Changes)

Administrative and Permitted Camps

Signs

Permanent Structures

Issue 4: Clearly defined guidelines are needed for responding to increased requests for new Outfitter and Guide Permits and for responding to requests for more user days from existing outfitters.

Most Wildernesses in the west are inundated with requests from potential outfitters who want to operate in the area. New types of outfitting, institutional outfitting, outfitters who have outfitted elsewhere and want to change locations or expand operations, and currently permitted outfitters who want to increase user days, all factor into these requests.

Clearly defined guidelines relating to types of uses permitted and numbers permitted need to be established so both existing outfitters and new outfitter requests are treated fairly and consistently throughout the wilderness.

Indicators for this issue include:

Consistent guidelines for outfitters and guides relating to new permits and user days are defined.

Issue 5: Encroaching noxious weeds threaten native vegetation and habitat

The A-P is relatively weed free but weeds are appearing at trailheads, along trails and at some spots inside the wilderness boundary. Noxious weeds are a serious threat to native vegetation and the very naturalness which defines Wilderness. This influence can be on a level of process, structure, or composition. For example, a hillside covered with knapweed is very different from one which has natural species. It will burn differently, provide different forage for wildlife, have different rates of soil erosion, different moisture retention, and a very different appearance to those who pass by on the trail. Potentially, weeds can change how the wilderness ecosystems function and how the wilderness is experienced. Guidelines are necessary to prevent, detect, monitor, and contain or eliminate weeds.

Indicators for this issue include

Noxious weeds are prevented, detected, monitored, contained or eliminated

Issue 6: Fish stocking changes native communities

In recent years questions have been raised about the impacts of fish stocking on natural biological communities. Fish stocking is conducted by Montana Fish, Wildlife and Parks in coordination with the Forest Service. The management of fish habitat, wilderness integrity and visitor use cannot be totally separated.

The practice of stocking was established prior to the passage of the Wilderness Act and, although it is not supported by everyone, it is a traditional practice and supports a traditional use by visitors. Stocking fish in the waters of the A-P has altered the natural biological community in and around many of the approximately 17 lakes that support fish as well as in lakes which are currently barren but where stocking was attempted in the past. Some streams have also been altered by direct stocking or by fish moving into the streams from connected stocked lakes.

Indicators for this issue include:

Fishless lakes remain fishless.

Native populations are not further displaced by non-natives as a result of new stocking activities.

Issue 7: Research Natural Areas were proposed by Forest Plans but have not yet been established

The Forest Plans proposed two research natural areas, Goat Flat in the NW portion of the A-P and the East Fork along the East Fork of the Bitterroot River. This document proposes to establish both RNA's, The acreage of the Goat Flat RNA is proposed to be increased, as mentioned in the Purpose and Need, and now includes more acreage both within and outside the Wilderness.

Research Natural Areas (RNA's) are lands that are permanently protected for the purposes of maintaining biological diversity, conducting non-manipulative research and monitoring, and fostering education. One of the goals of RNA designation is to provide for representation of major ecosystem types within the RNA network. In some cases RNAs are located within Wilderness, resulting in overlapping designations. In these situations, Wilderness management standards and guidelines take precedence. However, management of Wilderness RNA's should ensure that these portions of Wilderness are maintained in as undisturbed a state as possible.

Indicators for this issue include:

· RNA's are established.

ALTERNATIVE DEVELOPMENT PROCESS

Alternatives reflect suggestions from the public, input from resource professionals and recommendations from those involved with wilderness management. Alternatives were developed to respond to the identified issues. The concept of "Limits of Acceptable Change", (LAC), was used in developing alternatives. All alternatives are designed to meet the direction of the 1964 Wilderness Act and Forest Service national and regional Wilderness policy direction.

NATIONAL WILDERNESS MANAGEMENT DIRECTION

All alternatives for the Anaconda-Pintler Wilderness must be consistent with the existing direction provided by the Wilderness Act, other Federal Regulations which apply, and policy from the Forest Service Manual (FSM 2320).

♦ The Wilderness Act

The 1964 Wilderness Act provides general direction for managing Wilderness and protecting its values. The Act states that Wilderness areas: "...shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character..."

Department of Agriculture Regulations

The U.S. Department of Agriculture, (USDA), regulations further specify that Forest Service wilderness areas will be managed to protect and where necessary restore the wilderness character of the land and its specific values of solitude, physical and mental challenge, scientific study, inspiration, and primitive recreation. To achieve that objective the Department policy directs that natural ecological succession be allowed to operate freely, use levels in the wilderness be consistent with the maintenance of primitive conditions and that in resolving conflicts over resource use, wilderness values will be dominant. (36 CFR 293.2).

The following are some of the key Forest Service manual directions relating to Wilderness Management.

♦ Forest Service Manual (2320 Section)

Protect Wilderness values as one of the multiple uses of National Forests;

Keep wilderness ecosystems unaffected by human influences;

Minimize effects of special provisions, but allowed uses, such as grazing allotments and diversion ditches.

Perpetuate wilderness values including scientific study, education, solitude, physical and mental challenge, inspiration and primitive recreation.

Gather data to increase understanding of wilderness ecology, uses, management, and visitor behavior;

Wilderness values should be dominant in making management decisions;

Use of other resources in Wilderness should be compatible with Wilderness management objectives;

Cease or remove non-essential activities and structures;

Consider the effects of wilderness on activities on both sides of the wilderness boundary during planning;

Coordinate management of wilderness across administrative boundaries.

Where choices must be made between wilderness values and visitors or any other activity, preserving the wilderness resource is the overriding value. Economy, convenience, commercial value, and comfort are not standards of management or use of wilderness.

Develop a monitoring plan to ensure standards and guidelines are met.

DESCRIPTION OF ALTERNATIVES

The IDT analyzed 5 alternatives, including the no action alternative. Alternatives address the issues in different ways and meet the purpose and need for action to varying degrees. Alternatives have different types and different amounts of administrative action to minimize

bio-physical and social impacts. The alternatives vary by the following actions: Group Size limits, Permits required, Campsites permitted, Campfires permitted, Resource Protection Facilities permitted, Trails permitted, Stock Feed Requirements and Stock Access and Containment. Reference Table II , Chapter II, page 57 for these descriptions.

Alternative A (The No Action Alternative)

The No Action Alternative would not change current direction in the A-P. Forest Plans would not be amended with updated direction. Management zones would not be defined; specific goals, objectives, standards and guidelines would not be established to measure change in the desired condition of the wilderness. Group size would remain 15 people and 20 head of stock. No self-issuing or agency issued permits would be required. Only special use permits would still be required. New campsites would continue to be naturalized to slow proliferation of campsites. Campfires would not be prohibited in specified locations. No changes in resource protection facilities that currently exist in the wilderness such as the toilet and hitching rack at Mystic and hitching rack at the top of Hope Lake trail would occur. No new system trails would be built. Reconstruction, including relocation of short stretches for resource protection or safety purposes would be allowed on existing trails. Social trails and other user-built trails would be discouraged and eliminated where possible. Established way trails with frequent use may be left in place but would not be improved, signed, or shown on a map. Abandoned portions of trails would be naturalized. Weed seed free feed would be required and grazing would be allowed. The 200' grazing and tethering of stock setback requirement would remain in place. Education efforts would be intensified to insure that the public does not expect to find forage in the A-P. Hope Lake Tr. #424 would still be closed to travel with stock. Appropriate stock containment would be emphasized. No change in the way new outfitters or current outfitters are currently handled in the A-P. Also, no change in fish stocking within the wilderness. The two proposed RNA's would not be formally designated but continue to be managed in status quo to retain the option for future designation through the next planning cycle. Management direction for the proposed areas would remain the same as in the current Forest Plans. Current A-P direction does not address noxious weeds. Forest Plan direction does not address weeds in wilderness. Current A-P direction specifies that Mystic Lake Cabin will be administratively phased out.

Alternative B

Alternative B is the most recreation oriented of the action alternatives. Zones are initiated with goals, objectives, standards and guidelines for each zone. Actions are necessary to maintain the conditions of each zone. This alternative is least restrictive. The tool for preventing bio-physical impacts is "hardening", i.e. facilities such as hitch racks and backcountry toilets are constructed to concentrate impact and focus use. This alternative has the least Zone I and the most Zone IV. It also has less Zone II and more Zone III than the other action alternatives. Group size would remain 15 people and 20 head of stock. A free, mandatory, self-issuing permit would be required year round. This alternative would allow more areas to have recognizable campsites. Some naturalizing will still occur. More large sites would be retained. No restrictions with campfires. Resource protection facilities such as hitch racks, toilets etc. would be used. No new system trails would be built. Reconstruction, including relocation of short stretches for resource protection or safety purposes would be allowed on existing trails. Social trails and other user-built trails would be discouraged and eliminated where possible. Established way trails with frequent use may be left in place but would not be improved, signed, or shown on a map.

Abandoned portions of trails would be naturalized. Weed seed free feed would be required and grazing would be allowed with 200' setback requirement remaining in place. Education efforts would be intensified to insure that the public does not expect to find forage in the A-P. Hope lake Trail #424 would still be closed to travel with stock. Appropriate stock, containment would be emphasized. New outfitters may be considered if 1-3 are met in Table II, Chapter II, page 58. For currently permitted uses, existing outfitters will be capped at a combination of the 10 year use high as shown in Table V, Chapter III, page 87, plus an additional 50 use days if the demand is there and monitoring shows that impacts are acceptable. Operating plans will determine appropriate location and use levels of base, spike, progressive and drop camps within guidelines, and standards set for each zone. No camps within the wilderness will have permanent improvements. In cooperation with Montana Fish, Wildlife and Parks the guidelines for fish stocking will be updated to move towards more natural conditions. No fishless lakes will be stocked. Recreational fishing will be provided where appropriate. Management decisions will focus on protection of those streams where known or suspected pure strains of West Slope Cutthroat or Bull trout exist. Stocking will follow goals, objectives and guidelines on Chapter II pages 31-33. Stocking would be considered when either criteria listed in Table II, Chapter II, page 59 is met. When feasible stocking should be done using traditional means instead of helicopter or airplane. The two proposed RNA's would be established. Guidelines for RNA's will include 1-7 on Table II, Chapter II, page 59. A combination of education, detection, prevention, and eradication methods will be used to prevent weed infestations before they occur. Existing inventoried noxious weeds will continue to receive follow-up treatments. New infestations will be eradicated as soon as possible after being inventoried. Weed monitoring will continue. Further analysis has determined Mystic Lake Cabin has historic importance and is eligible for listing under the National Register of Historic Places. Thus, it will not be phased out by administrative action and measures will be taken to protect and stabilize the cabin as described in Chapter II, page 35.

Alternative C (The Preferred Alternative)

Alternative C initiates more measures to change use patterns and decrease impact causing activities. Actions reflect emerging problems and are preventative with emphasis on minimizing social and bio-physical impacts. This alternative maintains or slightly improves current conditions. The distributions of zones is a mix which will result in less evidence of recreational use. Group size is lowered to any combination of stock and people which does not exceed 16. A free, mandatory, self-issuing permit would be required year round. This alternative would continue to naturalize new campsites and downsize large campsites. Campfire closures within 1/4 mile of the following lakes would be initiated: Oreannos. Sawed Cabin, Upper Phyllis, Upper Carpp, Surprise, Bear, Buck, Emerald, Lost, Lower Phyllis, Park, Sauer, Continental, Unnamed below Queener Mtn. and Unnamed west of Warren lake. Fewer resource protection facilities would be used. Placement of facilities would only be done if a serious deterioration of resources occurred. No new system trails would be built. Reconstruction, including relocation of short stretches for resource protection or safety purposes would be allowed on existing trails. Social trails and other user-built trails would be discouraged and eliminated where possible. Established way trails with frequent use may be left in place but would not be improved, signed, or shown on a map. Abandoned portions of trails would be naturalized. Weed seed free feed would be required and grazing allowed with 200' setback requirement would still be in place. Education efforts would be intensified to insure that the public does not expect to find forage in the A-P. Hope lake Trail #424 would still be closed to travel with stock. In addition. camping with stock within 1/4 mile of Sawed Cabin, Oreamnos and Ripple Lakes would be prohibited. Appropriate stock, containment would be emphasized. outfitters may be considered if 1-3 are met in Table II, Chapter II, page 58. For currently permitted uses, existing outfitters will be capped at a combination of the 10 year use high as shown in Table V, Chapter III page 87, plus an additional 50 use days if the demand is

there and monitoring shows that impacts are acceptable. Operating plans will determine appropriate location and use levels of base, spike, progressive and drop camps within guidelines, and standards set for each zone. No camps within the wilderness will have permanent improvements. In cooperation with Montana Fish, Wildlife and Parks the guidelines for fish stocking will be updated to move towards more natural conditions. No fishless lakes will be stocked. Recreation fishing will be provided where appropriate. Management decisions will focus on protection of those streams where known or suspected pure strains of West Slope Cutthroat or Bull trout exist. Stocking will follow goals. objectives and guidelines in Chapter II on pages 31-33. Stocking would be considered when either criteria listed in Table II, Chapter II, page 59 is met. When feasible stocking should be done using traditional means instead of helicopter or airplane. The two proposed RNA's would be established. Guidelines for RNA's will include 1-7 on Table II, Chapter II, page 59. A combination of education, detection, prevention, and eradication methods will be used to prevent weed infestations before they occur. Existing inventoried noxious weeds will continue to receive follow-up treatments. New infestations will be eradicated as soon as possible after being inventoried. Weed monitoring will continue. Further analysis has determined Mystic Lake cabin has historic importance and is eligible for listing under the National Register of Historic Places. Thus, it will not be phased out by administrative action and measures will be taken to protect and stabilize the cabin as described in Chapter II on page 35.

Alternative D

Alternative D has further restrictions put in place to minimize the impacts of recreation. This alternative is the most restrictive. This alternative has the most Zone I and II and the least III and IV. It has the highest number of regulations, signs, etc. within the wilderness. It would change the wilderness experience more than the previous alternatives. Controls would change use patterns and decrease impact causing activities. Group size would drop to any combination of people and stock up to 12. A free, mandatory, self-issuing permits would be required year round as well as an office issued permit required for all overnight stock use. This would give an opportunity to place use in areas that are appropriate, not already occupied by other stock users and offer an opportunity to share concerns, trail conditions and techniques for minimizing stock damage. Campsites may be designated in some areas and some areas may be closed to camping. Campfire closures within 1/4 mile of the following lakes would be initiated: Oreamnos, Sawed Cabin, Upper Phyllis, Upper Carpp, Surprise, Bear. Buck, Emerald, Lost, Lower Phyllis, Park, Sauer, Continental, Unnamed below Queener Mtn. and Unnamed west of Warren lake, Carrp. Ripple, Hidden, Kelly, Johnson, Tamarack and Flower. Fewer new resource protection facilities would be used. Further restrictions in lieu of facilities to prevent resource damage. No new system trails would be built. Reconstruction, including relocation of short stretches for resource protection or safety purposes would be allowed on existing trails. Social trails and other user-built trails would be discouraged and eliminated where possible. Established way trails with frequent use may be left in place but would not be improved, signed, or shown on a map. Abandoned portions of trails would be naturalized. Overnight stockusers would be required to pack in weed seed free feed. Hope lake Trail #424 would still be closed to travel with stock. In addition, camping with stock within 1/4 mile of Sawed Cabin, Oreamnos, Ripple and Upper Seymour Lakes would be prohibited. Appropriate stock, containment would be emphasized. New outfitters may be considered if 1-3 are met in Table II, Chapter II, page 58. For currently permitted uses, existing outfitters will be capped at a combination of the 10 year use high as shown in Table V, Chapter III page 87, plus an additional 50 use days if the demand is there and monitoring shows that impacts are acceptable. Operating plans will determine appropriate location and use levels of base, spike, progressive and drop camps within guidelines, and standards set for each zone. No

camps within the wilderness will have permanent improvements. In cooperation with Montana Fish, Wildlife and Parks the guidelines for fish stocking will be updated to move towards more natural conditions. No fishless lakes will be stocked. Recreation fishing will be provided where appropriate. Management decisions will focus on protection of those streams where know or suspected pure strains of West Slope Cutthroat or Bull trout exist. Stocking will follow goals, objectives and guidelines in Chapter II, pages 31-33. Stocking would be considered when either criteria listed in Table II, Chapter II, page 59 is met. When feasible stocking should done using traditional means instead of helicopter or The two proposed RNA's would be established. Guidelines for RNA's will include 1-7 on Table II, Chapter II, page 59. A combination of education, detection, prevention, and eradication methods will be used to prevent weed infestations before they occur. Existing inventoried noxious weeds will continue to receive follow-up treatments. New infestations will be eradicated as soon as possible after being inventoried. Weed monitoring will continue. Further analysis has determined Mystic Lake cabin has historic importance and is eligible for listing under the National Register of Historic Places. Thus, it will not be phased out by administrative action and measures will be taken to protect and stabilize the cabin as described in Chapter II, page 35.

Alternative E

Alternative E calls for an agency issued permit which could incorporate a quota system, i.e. it could limit numbers when and where necessary to prevent social and bio-physical impacts. In this case, administrative controls would be "up front". Once inside the Wilderness there would be fewer regulations, signs, and administrative constraints than in Alternative D. Inside the Wilderness, it would provide more of a feeling of wildness and enhance the Wilderness experience. Mix of zones is virtually the same as Alternative D. Group size would be controlled by a permit with 12 people and 15 head of stock allowed. This alternative has the flexibility of allowing large groups on occasion in areas which already have large camps because it provides up front control. This permit would be an agency issued permit with use quotas by trailheads and destination areas. Permit would revert to self-issuing during the "off-season" (11/15-5/30). With a permit system campsite proliferation would be easier to control and will less likely to increase in size. Impacts are easier to minimize with a permit system. Fewer areas will develop barren core areas because of displacement. Campfire closures within 1/4 mile of the following Lakes would be initiated: Oreamnos, Sawed Cabin, Upper Phyllis, Upper Carpp, Surprise, Bear, Buck, Emerald, Lost, Lower Phyllis, Park, Sauer, Continental. Unnamed below Queener Mtn. Unnamed west of Warren lake. Resource protecting facilities would not be increased and stay the same as current management. No new system trails would be built. Reconstruction. including relocation of short stretches for resource protection or safety purposes would be allowed on existing trails. Social trails and other user-built trails would be discouraged and eliminated where possible. Established way trails with frequent use may be left in place but would not be improved, signed, or shown on a map. Abandoned portions of trails would be naturalized. Weed seed free feed would be required and grazing allowed with 200' setback requirement would still be in place. Education efforts would be intensified to insure that the public does not expect to find forage in the A-P. Hope lake Trail #424 would still be closed to travel with stock. Appropriate stock, containment would be emphasized. If the public is limited by quotas new outfitting permits would not be issued. For current outfitters no increases in outfitter use days in areas where quotas are imposed on the public. In cooperation with Montana Fish, Wildlife and Parks the guidelines for fish stocking will be updated to move towards more natural conditions. No fishless lakes will be stocked. Recreation fishing will be provided where appropriate. Management decisions will focus on protection of those streams where know or suspected pure strains of West Slope Cutthroat or Bull trout exist. Stocking will follow goals, objectives and guidelines in Chapter II, pages 31-33. Stocking would be considered when either criteria listed in Table II, Chapter II, page 59 is met. When feasible stocking should done using traditional means instead of helicopter or airplane. The two proposed RNA's would be established. Guidelines for RNA's will include 1-7 on Table II, Chapter II, page 59. A combination of education, detection, prevention, and eradication methods will be used to prevent weed infestations before they occur. Existing inventoried noxious weeds will continue to receive follow-up treatments. New infestations will be eradicated as soon as possible after being inventoried. Weed monitoring will continue. Further analysis has determined Mystic Lake cabin has historic importance and is eligible for listing under the National Register of Historic Places. Thus, it will not be phased out by administrative action and measures will be taken to protect and stabilize the cabin as described in Chapter II, page 35.

ACTIONS COMMON TO ALTERNATIVES B thru E

All action alternatives propose to update Forest Plan direction. Each creates a zone system and a prescription for each zone. Alternatives vary in the amount of each zone and in the tactics used to achieve or maintain the desired conditions in each zone. Details of actions by alternative are summarized in Table II, Chapter II pages 57-59.

All action alternatives, (B-E), will:

Change Goals, Objectives, Guideline And Standards Of The Forest Plan

The current A-P Plan is an appendix of the Forest Plans thus, a change in current direction requires Forest Plan Amendment. The ID team reviewed the existing direction for the A-P as contained in the A-P Wilderness Management Plan for 1977, and identified those portions that needed to be changed or refined. Some parts of the 1977 Wilderness plan remain pertinent and there is no need to update them. They will continue to provide direction for the A-P. The goals and objectives listed below, and discussed in this document, are only those where change is proposed. The following goals, objective, guidelines and standards are changes that will apply Wilderness-wide.

Recreation

Goals

Maintain opportunity for high quality, primitive recreation.

2. Maintain opportunity for solitude.

3. Evidence of management will be the minimum necessary to achieve the Desired Future Condition.

Objectives

- 1 Minimize number of campsites and degree of impact on soil and vegetation in existing campsites. (See Table I, Chapter II, page 55 and the Zone Descriptions portion of this chapter, pages 36-42 for specific numbers of campsites permitted in each zone.)
- 2. Restore degraded areas to an acceptable level, as defined in the zones.
- 3. Have an active education program which emphasizes the importance of wild places and "Leave No Trace" ethics and practices.

Guidelines

- 1 Provide a range of opportunities for primitive and unconfined recreation.
- 2. Maintain opportunity for solitude by eliminating most user built trails, naturalizing new campsites, and applying other measures as necessary to concentrate or disperse use.
- 3 Provide recreation options which include large trailless areas as well as maintained trails for stock users and hikers.
- 4. Limit and distribute use as necessary to protect wilderness.

Commercial Outfitters

Goals

Provide opportunities for outfitted service for recreation activities.

2. Outfitters and guides provide quality service in a manner compatible with use by other visitors.

- 3. Outfitter and guide services are conducted in a manner which maintains the wilderness resource.
- 4. Outfitter and Guides educate their clients on "Leave No Trace" skills and ethics, provide good examples of these practices, and interpret the natural and human history of the area.

Objectives

- 1. Outfitted use helps achieve proposed objectives, standards and guidelines associated with each zone.
- 2. Use allocation process, and evaluation criteria for similar operations, will be consistently applied by all Ranger Districts in the Anaconda-Pintler as described in the Guidelines.

- 1. New permits, or increased user days on existing permits, will not be issued unless there is a resource capacity to absorb the use without damage to wilderness values, an ability by the Forest Service to administer more permits, and a demonstrated public demand for additional outfitted A-P use.
- 2. If new permits are considered, the following five step process will be followed.
 - a. Determination of demonstrated public need is completed and documented by the Forest Service. Determination of need examines: 1) Agency Mission, 2) Opportunities, 3) Land Capability, 4) Social Capacity, 5) Demand/Supply as further defined in the Guidebook on Outfitter and Guide Administration (February 1997).
 - b. The issuance proposal is fully evaluated and the appropriate NEPA analysis/documentation has been completed.
 - c. The analysis and decision are documented and linked to the Forest Plan.
 - d. The prospectus process is followed for solicitation for applicants, evaluating competition and providing required documentation/information on applicants. This process is described in Forest Service Manual (FSM 2712.2)
 - i. Applicant has proven financial capability and possesses adequate experience/expertise to operate a successful sustainable business.

- ii. The most highly qualified applicant(s) has been selected via a formal documented applicant selection/use allocation process.
- e. Permit issued consisting of:

Basic permit

- ii. Operating plan for the tenure of the permit
- iii. Annual itinerary (annual operating plan).
- 3. Each outfitter will be assigned an area in the operating plan.
- 4. Up to 100 incidental commercial/institutional use days will be allowed annually per district. These days are not intended for repeated use by the same outfitter nor are these days intended for existing outfitters. They are allotted on a one time basis.

Fish

The intention of this plan is to promote an integrated approach which minimizes the effects of fish stocking in the A-P with guidelines that move the wilderness towards more natural conditions. Over the years there have been various stocking strategy recommendations for given lakes and some attempts to outline overall strategy. This management framework outlines an approach that has been implemented in other Wilderness areas in Montana and will be conducted with full cooperation of Montana Fish, Wildlife and parks.

Goals

- 1. Work in close cooperation with Montana Fish Wildlife and Parks to reestablish or maintain indigenous species.
- 2. Move towards native biological communities where possible.
- 3. Use an ecosystem approach in fisheries management which values the natural biological communities of the Anaconda-Pintler.
- 4. Contribute to the restoration of native strains of fish.

- 5. Provide fishing recreation where appropriate.
- 6. Protect native fish species.

Objectives

- 1. Fishless waters represent special esthetic, scientific, biological, and social values. Because of this the Forest Service prefers that these waters remain unstocked. See Table VI, Chapter III, page 89.
- 2. Stock only indigenous species in lakes that have been evaluated and determined appropriate by the Montana Fish Wildlife and Parks and the Forest Service.
- 3. Stocking methods will be in keeping with wilderness values.

- 1 For those headwater lakes, which require periodic stocking to maintain a sport fishery, the following options will be considered:
 - a. Allow the fish to naturally die out and maintain as a barren lake.
 - b. In those headwater lakes where native species exist, continue to stock with native species.
 - c. Where "a" or "b" do not apply, MFWP immediately switches to using native species in those waters where native populations presently exist downstream of stocked headwater lakes. Where native species brood stocks are unavailable, the stocking of non-natives be terminated until an appropriate brood stock is developed.
 - d. Where native populations <u>do not exist</u> downstream of stocked headwater lakes switch, as soon as practical to using native species.
- 2. The Forest Service and the MFWP will cooperatively work together to implement management activities to reduce the threats to existing native populations within the drainage as a result of the past establishment of self-sustaining populations of non-native species.

- 3. The Forest Service and MFWP will cooperatively work together to modify fish stocking strategies in lakes that are receiving excessive damage (increase in social trails, barren core areas around campsites, number of campsites and number of new fire rings) from wilderness users.
- 4. In cooperation with MFWP aerial stocking of fish may be permitted for those waters in the wilderness where this was an established practice before wilderness designation if there is continued need or where other practical means are not available

Vegetation

Goals

- 1. Maintain native vegetation, including natural composition, structure and function.
- 2. Protect rare and sensitive plants.
- 3. Eliminate, contain and prevent noxious weed infestations.
- 4. Maintain inherent disturbance regime for vegetation.

- 1 Follow the 1993 Anaconda Pintler Fire Management Guidelines.
- 2 Take actions necessary to prevent or restore recreation impacts on vegetation if they are in conflict with desired future condition. After further analysis, these actions might include such things as campfire prohibitions, camping closures, stock closures, restoration planting or limiting numbers of visitors.
- 3. Use a mix of methods to prevent and eliminate noxious weed infestations including the following:
 - a. Eradicate or contain weeds in areas adjacent to the wilderness to prevent invasion from the perimeter. This includes treatment of trailheads and sides of approach roads, clear-cuts, and adjacent range allotments.
 - b. Eradicate weeds within wilderness with a combination of hand pulling, biological and chemical methods as needed.

- c. Enforce weed seed free feed regulation, CFR 261.50 (a), which requires that all feed in the Anaconda-Pintler be certified weed seed free or pelletized.
- d. Encourage stock users to have animals on weed seed free feed for 48 hours prior to wilderness entry.
- e. Have an active education program on weed spread prevention, weed recognition and the negative effects of weeds on ecological processes.

Research Natural Areas

Recommend establishment of the East Fork and Goat Flat proposed Research Natural Areas as shown in Maps II and III. Both of these RNA's were proposed in the original Bitterroot and Deerlodge National Forest Plans. The East Fork proposed RNA is wholly contained within the A-P Wilderness, and the boundary remains the same as proposed in the Forest Plan. The boundary of Goat Flat proposed RNA has been modified to include a larger representation of alpine and subalpine plant communities and endemic plant species. Goat Flat RNA is partially within the A-P Wilderness, (679 acres) and partially outside the Wilderness boundary. (697 acres).

Goals

Preserve and monitor RNA's as representative ecosystem types and for their special vegetative associations and sensitive species. These special elements are noted in the establishment record and existing conditions section of this document.

Objectives

1. No increase in number of campsites or their degree of impact within the East Fork RNA. No campsites in Goat Flat RNA.

- 1 Naturalize any new campsites which appear.
- 2. Do not stage crews for firefighting or use area for repeated helicopter landings.

- 3. Avoid group camps for administrative purposes, including spike or base camps for fire fighting, trail construction, contract work, or other camps for field work;
- 4. Do not permit outfitter camps or other camps under special use permit.
- 5. Pay special attention to sensitive species and associations if any trail relocation or reconstruction is necessary.
- 6. No new range allotments or new water diversions are permitted.
- 7 Eliminate noxious weeds in accordance with guidelines discussed Table II. Chapter II, page 59. Other exotic species will also be eliminated if it is determined that they are displacing native vegetation.

Mystic Lake Cabin

Goals

1 Preserve Mystic Lake Cabin for its cultural significance as part of the historic component of the wilderness resource.

Objectives

1 Maintain and protect Mystic Lake Cabin from deterioration in a manner that allows for its continued, occasional, administrative use.

Guidelines

1 Individual preventative fuels management will be employed in the vicinity of the cabin for the purpose defending the cabin in the event of a wildfire or prescribed natural fire. Efforts to save the cabin will be taken if a fires threatens. These measures could include a variety of suppression tactics but would not include extensive cutting of vegetation.

Standards

1. Maintenance and rehabilitation of the cabin will not use mechanized tools and will be done in a fashion that meets the standards of management for a historic structure eligible for listing under the National Register of Historic Places.

Establish Management Zones

Management zones are based on the Limits of Acceptable Change (LAC) concept. It sets limits, in different portions of the Wilderness, based on measurements of conditions. The intent of establishing zones is to maintain or re-establish acceptable resource and social conditions. These conditions represent the maximum limit of change from natural which will be allowed. Zones allow managers to apply a range of desired conditions which are specific and acceptable within wilderness. Zones are based on the premise that the Wilderness is not homogeneous. Some areas will have more human activity and thus show more bio-physical and social impacts than do areas with fewer people and their associated activities. Conditions, as described in narratives and as measured by indicators, vary from one zone to the next. Management actions appropriate to each zone are identified and procedures for monitoring and evaluating the effectiveness of management actions are established.

Alternatives and zones are related. Maps IV through VII show this relationship. Zone direction does not vary by alternative. Location and amount of each zone does vary by alternative. Various actions which differ by alternative need to be taken to maintain zone conditions. See Table II, Chapter II page 57.

For example, minimizing campsite impacts is a goal in all alternatives but the degree to which this will be applied varies by zone and alternative. The way results will be attained varies too. Campsite impacts can be influenced by many actions, from education to various restrictions such as: bans on campfires or camping, hardening or designating campsites, reducing group size, eliminating stock use in some areas, a permit system which limits over all use, etc.

In all action alternatives, the A-P will be primarily Zone I. Thus, in direction common to all action alternatives, the A-P will have a high degree of apparent naturalness, ecological processes will operate with no perceptible evidence of human impact or use, there will be outstanding opportunities for solitude and recreation will be characterized as primitive, unconfined, and challenging. The area will function as a wild place. It will look and feel wild to those who visit.

Relationship Between Human Influence and Zone Delineation

Lakes

The effects of recreation on the area around lakes may create a different zone in areas adjacent to the lakes. The area affected by recreation around lakes may include: frequent human presence during use season, campsites which persist from one season to the next, user trails around lakes, tree damage from recreation use, etc. The area which is affected varies by a lake's proximity to a trail, the nature of the lakeshore, and use patterns.

Some lakes display very little evidence of use and the surrounding area does not differ from the adjacent Zone I. At other lakes some influence and impact is apparent within approximately a 500' radius of the lake. More heavily used lakes may have some influence

and impacts apparent within 1/4 mile radius. The influence of use areas is displayed in Table IV, Chapter II, page 63.

• Trails

Trail corridors inevitably display some influence from human activity, (sight, sound, or biophysical effect), for a distance of approximately 200' each side of the trail. Table IV, Chapter II, page 63, reflects zone changes by Alternative.

• Other Areas, as shown in Table IV, Chapter II, page 63, are simply use areas which are generally recognized. They are bounded by natural use patterns which are primarily defined by the surrounding geography, such as steep slopes, rock, or dense vegetation. The area is influenced, to some degree, approximately 1/2 mi. from its center.

Description of Management Zones

• Zone I (Most Natural) - exists in essentially trailless areas where use and impacts are not focused by destinations. This area has the lowest level of human disturbance. It is characterized by a virtually unmodified natural environment. The A-P is primarily Zone I.

Goals

- 1. This zone has the highest degree of apparent naturalness.
- 2. Ecological processes operate naturally, with essentially no perceptible or measurable evidence of human impact or use.
- 3. The area has outstanding opportunities for solitude and a primitive and unconfined type of recreation which requires self-reliance.
- 4. The area functions as a wild place. It looks and feels wild to those who visit.

Objectives

- 1. Campsite vegetation impacts recover annually.
- 2. Trails frequently used by humans seldom occur in this area.

3. Encounters with other groups and rangers are rare.

Standards

Eliminate or prevent the following in this zone:

- 1. System Trails
- 2. Signing

Guidelines

Through education and administrative actions, which may sometimes include physical removal, the following will be discouraged or eliminated:

- 1. Base Camps for fire suppression or other administrative purposes
- 2. Constructed Helispots; allow old sites to recover
- 3. Rock Campfire Rings
- 4. Barren Core Area associated with campsites
- 5. Campsite density greater than 1 per roving, radial, mile
- 6. Structures (except Heritage Resource)
- 7. Frequent Managerial Presence
- 8. Repeated use of Large Group Camps, including outfitter
- Zone II- composed primarily of some access routes and the high elevation lake areas found on the Philipsburg and NW Wise River District. It is close to the crest of the range and contains more destinations than any other portion of the wilderness. The

destinations include lakes, peaks, and high passes. Access in this zone is via secondary trails. Destination areas have moderate use and are relatively vulnerable.

Goals

- 1. This zone has a high degree of wilderness integrity and a low level of human disturbance.
- 2. The zone is characterized by a predominantly unmodified natural environment.
- 3. Ecological processes operate naturally with limited evidence of human impact.
- 4. Excellent opportunities exist for solitude and the area offers a primitive and unconfined type of recreation, requiring self-reliance

Objectives

- 1. Campsite impacts are minimal.
- 2. User built trails and social trails are minimized.
- 3. Encounters with other groups and rangers are uncommon.

Standards

1. Secondary trails are the highest standard trail in this area.

Guidelines

Through education and administrative actions, which may sometimes include physical removal, the following will be discouraged or eliminated:

- 1 Signing except at trail junctions and wilderness boundaries
- 2. Frequent Managerial Presence

- 3. Base Camps for fire suppression or other administrative purposes
- 4. Outfitter Base Camps
- 5. Rock Campfire Rings
- 6. Barren Core Area over 100 sq. ft.
- 7. Campsite density greater than 3 per roving, radial, mile
- 8. Structures, (except Heritage Resource, and trail structures for resource protection, e.g.waterbars.)
- ♦ Zone III- includes some popular destinations and more heavily used areas that are along popular routes used for overnight trips. The area is characterized by a predominantly unmodified natural environment. However, some sites are substantially affected by human activity. Such impacts include loss of vegetation and soil along travel routes, at campsites and at scenic attractions such as lakeshores and viewpoints. The area has both mainline and secondary system trails. Encounters with other groups and rangers on the trail or in campsites are expected. Campfire rings will exist only in heavily used sites where determination has been made that less damage occurs by concentrating use than by dispersing it. Impacts could persist from year to year but do not exceed defined objectives shown in Table I, Chapter II, page 55.

Goals

- 1. The zone has a high degree of wilderness integrity.
- 2. The zone is characterized by a minimal level of human disturbance.
- 3. Ecological processes operate naturally with limited evidence of human impact.
- 4. Opportunities for solitude are available.
- 5. A primitive and unconfined type of recreation, requiring self-reliance, is characteristic of the area.

Objectives

Objectives

- 1. User-built trails and social trails are minimized.
- 2. Conditions that precipitate user conflicts are minimal.

Guidelines

The following will be discouraged through education and may be physically modified or removed if they occur:

- 1. Rock Campfire Rings
- 2. Barren Core Area over 200 sq. ft.
- 3. Campsite density greater than 6 per roving, radial, mile
- 4. Signing, except at trail junctions and wilderness boundaries.
- 5. Structures, (except Heritage Resource, and trail structures for resource protection or safety, e.g. waterbars or other resource protection structures, such as hitching rails or toilets).
- Zone IV (Transition/Portal)-receives the most use within the Wilderness and the highest percentage day use. It has the most human disturbance of any zone within the Wilderness. Despite this disturbance it is still characterized by a high degree of wilderness integrity and by a predominantly unmodified natural environment. However, some sites are substantially affected by human activity. Such impacts include loss of vegetation and soil along travel routes, campsites and scenic attractions. Ecological processes still operate naturally with little evidence of human impact. Activity levels are such that some wildlife is displaced. Opportunities for solitude are available but less characteristic of this area. A primitive and unconfined type of recreation, requiring self-reliance, is characteristic of the area. Risk and challenge are somewhat less than in more remote areas of the wilderness. The area has both mainline and secondary system trails. User-built trails and social trails are minimized. Encounters with other groups and rangers on the trail or in campsites are expected. Conditions that precipitate user conflicts are minimal. Rock campfire rings will exist only in heavily used sites where determination has been made that less damage occurs by concentrating use than by dispersing it. Impacts could persist from year to year but do not exceed defined objectives shown in Table I, Chapter II page 55. Visitor use may be regulated to protect the environment and visitor experiences.

Goals

- 1. Maintain as much as possible a high degree of wilderness integrity.
- 2. Minimize the level of human disturbance.
- 3. Ecological processes operate naturally with little evidence of human impact.
- 4. Opportunities for solitude are available but mostly during off season.
- 5. A primitive and unconfined type of recreation requiring self reliance is characteristic of the area.

Objective

- 1 Minimize user-built and social trails.
- 2. Conditions that precipitate user conflicts are minimal.

Guidelines

The following will be discouraged through education and may be physically modified or removed if they occur:

- 1. Rock Campfire Rings
- 2. Barren Core Area over 500 sq. ft.
- 3. Campsite density greater than 8 per roving, radial, mile
- 4. Structures, (except Heritage Resource, and trail associated for resource protection, e.g. waterbars or other resource protection structures, such as hitching rails or toilets.)

Require a self-issuing (Alt. B-D) or agency issued (Alt.E) permit

Self-issuing, entry permits in Alt. B-D would be required for both day and overnight use. Permits would be free and available at trailheads. They would not regulate use. Although mandatory, spontaneity and convenience would be maintained.

A self-issuing permit is an inexpensive and accurate way to assess wilderness use. With current funding and staffing there is no way to obtain accurate information on numbers of users, length of stay, destinations, or type of visitors, i.e. (day, overnight, hikers, stock users, local, out of state, etc.). Many facets of management could be improved with a better information gathering tool. This method provides more useful data than trail counters, trailhead counts or sporadic backcountry encounter data.

Self-issuing permits provide an education opportunity, albeit a limited one, and help law enforcement in several ways. The system acts as a deterrent since people know their names are available to agency personnel at the trailhead. Rules and regulations on the tear off portion of the permit notify people and provide a handy reference for regulations and rationale. Law enforcement officials no longer need to be hesitant to enforce regulations because people "didn't know".

MONITORING COMMON TO ALL ALTERNATIVES

Conditions By Zone

Under any action alternative, monitoring which gauges whether the goals, objectives, standards and guidelines are being attained will be necessary. Site conditions will be assessed in a variety of ways. Recreation impacts and administrative actions (which have specific indicators as shown in Table I of Chapter II, page 55.) will be monitored. These include such things as campsite density, barren core area, number of social trails, encounters, administrative or permitted camps, noxious weeds, and vegetation impacts that result from recreation use. Impacts include firewood utilization, forage utilization and vegetation disturbance or elimination around campsites

In addition to monitoring tied to specific indicators in the table, other monitoring also helps gauge the health of the resource. An Air Quality Related Values plan exists to monitor air quality. Other areas of concern are considered below.

Natural Fire Occurrence

The goal of wilderness fire management is that fire play as natural a role as possible within the Wilderness displaying a frequency and severity similar to historic range of variability. Frequency and severity are both monitored as part of the 1993 Fire Management Guidelines (FMG), for the Anaconda-Pintler. The number of natural starts is compared with the number of fires which are allowed to follow their natural course without suppression. The monitoring plan in the FMG is adequate and will not be changed by this EA.

Monitor fire frequency, intensity, and acres burned relative to lightning starts and historic activity.

Grazing Impacts from Recreational Use

Standards for the grazing by recreational stock of uplands, wet meadows and riparian areas along streams in the A-P Wilderness are derived from prescription guidelines in the Bitterroot, Deerlodge and Beaverhead Forest Plans; the Beaverhead Forest Plan Riparian Amendment; the USFS Region One Soil and Water Conservation Practices Handbook; and accepted Forest Service pack/saddle stock practices.

Land managers will apply the appropriate type of standard and monitoring frequency according to site-specific need.

These standards are as follows:

1. Forage Utilization

a. Forage utilization on wet meadows and riparian sites will not exceed 50% of the total annual growth of grasses, sedges and other herbaceous forage when measured at or projected to the end of the growing season. A more restrictive standard may be applied to sites that are trending downward or are identified as having a lower than desirable ecological condition.

A simple visual technique can be taught to the general public and used as a guideline to encourage the frequent movement of stock. The stockhandler should count on leaving at least 2/3 of the plant height that was on the site when they arrived. This will help insure that a site will not be overgrazed by successive users over the remainder of the season and serves as a minimum guarantee for maintaining plant vigor and preventing the development of bare soil patches.

- b. On riparian sites associated with streams containing bull trout and westslope cutthroat trout, forage utilization will not exceed 35% to 45% of the herbaceous growth when measured at or projected to the end of the growing season. Identify these areas for your outfitters, wilderness rangers and general users and emphasize the need to graze these sites lightly. A rule of thumb would be to leave 3/4 of the forage present on the site when the party arrives.
- c. Upland site utilization (those grazeable areas, dominated by species such as elk sedge) and not influenced by groundwater) will not exceed 50% of the total annual growth. More restrictive standards may be assigned to sites that are trending downward or are identified as having a less than desirable ecological condition.

- d. No more than 15% of the surface area of any forage site for stock may exceed the above utilization standards. Forage sites in the A/P may vary from a fraction of an acre to fifty acres or more.
- e. Estimates of forage utilization can be arrived at by using clipping and weighing inside and outside small exclosure cages, grazed plant transects, comparison with ungrazed sites, etc. Sampling methodologies are explained in FSH 2209.21 and "Sampling Vegetation Attributes", 1996, an Interagency Technical Reference.

2. Stubble Height Standards for Perennial Streams and Associated Vegetation

- a. Average leaf length of grasses and sedges in the bankfull zone (immediately adjacent to streams) will not be shorter than 4" at the end of the growing season.
- b. Average leaf lengths after grazing of the grasses and sedges in the floodplain zone will not be shorter than 3" at the end of the growing season. This standard applies to those floodplain zones on which sedge species, tufted hairgrass, alpine timothy or other species that typically grow leaf lengths well in excess of three inches.

Stubble height standards may not apply to some community types, such as Kentucky bluegrass, that at high elevations may not attain leaf lengths much greater than three inches. Employ utilization standards on these sites.

- c. Stubble height measurements are taken along representative stream segments within the forage site.
- d. More restrictive stubble heights may be prescribed for sites that are trending downward or that are in a less than desirable ecological status.

3. Streambank Alteration

- a. Riparian sites along streamcourses require other types of stock impact monitoring. The amount and kind of streambank trampling by stock hoof action should be tracked so that riparian function is maintained. Forage sites along streams or stream segments classified as "functioning-at-risk" (using hydrologic/ecological condition rating) or non-functioning may need seasonal limitations or closure to grazing in order to establish an improving trend in streambank and vegetation condition. This need will be determined on a site-specific basis.
- b. Some streambank alteration resulting from stock crossings or watering sites are inevitable, however, their number and size should be small for any forage site. An

increase in size or number of crossings and watering sites that may affect the function of the stream will warrant management action to control and mitigate the resource impacts.

4. Willow/Aspen/Other Browse Species Management

- a. Managers should monitor browse intensity of deciduous woody species such as willow and aspen by recreational stock to insure that the plant stands/communities within forage sites are maintaining "height growth". The accepted method for determining the health of woody browse stands is contained in <u>Browse Evaluation by Analysis of Growth Form</u> (Keigley and Frisina, 1998)
- b. Corrective management action on problem sites, where the sustainability of browse stands is affected by stock impacts, may include seasonal grazing limitations, closures or fencing.

The following areas have been identified as those with fairly regular recreational stock grazing, therefore ongoing observation is important for these areas.

Location	District
Meadows behind Warren Lake	Wise River
Elk Park	Wisdom
Seymour Horse Camp	Wise River
MacGlaughlin Meadows at Rainbow Lk.	Wise River
Meadow below Kelly Lk.	Sula
Meadow below Hidden Lk.	Sula
Buck Ridge Meadows	Sula
Kurtz Flat, both sides of river	Sula
Meadow above Mystic Lk. along CDT	Wisdom
Meadow on NW end of Mystic	Wisdom
Horse camp at Johnson Lake	Philipsburg

White Pine Blister Rust

Most of the high elevation areas in the Anaconda-Pintler support whitebark pine. Whitebark is both a critical component of the ecosystem and a special element of the wilderness experience for those who visit. Many areas in the northwest have growing

occurrence of a fungus, white pine blister rust, Cronartium ribicola. This fungus causes branch and stem cankers that eventually cause top kill and death of the infected whitebark pine trees. The Anaconda-Pintler has been relatively free of this disease compared to adjacent areas, however, recently, more and more areas have been showing infection. It is important to know how much this pathogen, which was introduced from Europe and Asia in the early 1930's, is influencing the natural conditions of the Anaconda-Pintler. It is also important to know how this area might differ from adjacent ones as far as resistance. Monitoring will involve mapping infestations of white pine blister rust in white bark and limber pine communities.

Research Natural Areas

Monitor the trail corridor and any existing campsites to make certain the vegetative associations and sensitive species are not disturbed by human activity or displaced by exotic species, particularly noxious weeds.

Monitor the existing campsites within the East Fork RNA to make certain they are not increasing in degree of impact. If any campsites become established within Goat Flat RNA they will be naturalized.

Monitor noxious weed and other exotic species.

Noxious Weeds

Monitor known infestations as well as inventory any new infestations of noxious weeds by placing them on maps and identifying species. If any treatment is administered the effects of that process will also be monitored.

COMPARISON OF ALTERNATIVES

Reference the following tables and maps.

Table II, Chapter II - Actions By Alternative - Recreation, pages 57-59

Table III, Chapter II - Summary of Standards, Guidelines, and Objectives by Alternatives, page 61

Table IV, Chapter II - Zones Designated for Lakes, Trails And Adjacent Areas-By Alternative, pages 63-65

Maps IV-VII Zone Maps - see Map Section

Alternative A (No Action Alternative)

The No Action alternative would not change current direction for the A-P. Forest Plans goals, objectives, guidelines and standards would not change with updated direction. Management zones would not be defined. Permits, either self-issuing or agency issued, would not be required. Clear guidelines for elimination of noxious weeds would not be in place nor would guidelines for responding to requests by outfitters and guides. Guidelines relating to fish stocking would not be updated. RNA's would not be formally designated but would continue to be managed in status quo to retain the option for future designation. Mystic Lake Cabin will be administratively phased out.

Alternative B

Alternative B is most responsive to people's desire to recreate in the A-P. It minimizes regulation and provides maximum recreation flexibility. Direction is provided for measuring changes resulting from recreation activity and minimizing recreation impacts. Specifics of this alternative are as follows:

- Recreation Use Zones Alternative B has more Zone III and IV than other Alternatives and has the least Zone I.
- Group Size The group size in this alternative will not change and is the same as existing numbers, 15 people and 20 head of stock.
- **Permits** required in Alternative B are free, mandatory, self-issuing permits available at trailheads.

A self-issuing permit is an inexpensive and accurate way to assess wilderness use. With current funding and staffing there is no way to obtain accurate information on numbers of users, length of stay, destinations or type of visitors, i.e. (day, overnight, hikers, stock users, local, out-of-state, etc.) Many facets of management could be improved with better information. Research and experience in other places have shown that self-issuing permits are a good information gathering tool. This method provides more useful data than trail counters, trailhead counts or sporadic back country encounter data.

Self-issuing permits provide an education opportunity, albeit a limited one, and help law enforcement in several ways. The system acts as a deterrent since people know their names are available to agency personnel at the trailhead. Rules and regulations on the tear off portion of the permit notify people and provide a handy reference for regulations and rationale. Law enforcement officials no longer need to be hesitant to enforce regulations because people "didn't know."

♦ Campsites

• Campsite Density - Alternative B has more Zone III and IV than other alternatives it will have the highest campsite density. This density will not exceed the objective for Zone IV which is less than 8/roving radial mile.

- ♦ Barren Core Area Alternative B has more Zone III and IV than other alternatives it will have more areas with larger barren core areas. The objective for Zone IV is less than 500 sq. ft. Zone III is less than 200 sq. ft.
- Social Trails Alternative B has more Zone III and IV than other alternatives therefore more social trails will be tolerated. The objective in Zone IV is fewer than 5 in camp areas and fewer than 3 elsewhere.
- Encounters Alternative B has more Zone III and IV than other alternatives therefore more encounters will occur. The objective in Zone IV is fewer than 5 encounters with groups, per day, along the trail on Zone 4 trails, and fewer than 4 groups per day in camps in Zone 4 destinations.
- ◆ Campfire Closures will not be instituted under Alternative B.
- Resource Protection Facilities will be a method of influencing use patterns and concentrating impact so it does not occur in numerous places. Such things as hitching racks and toilets will be more common in this alternative than any other. "Hardening" techniques will be more prevalent in this alternative than others. Less naturalization will take place.
- ♦ Stock Feed Requirements certified weed seed free feed or pelletized feed is required.
- Stock Access and Containment requirements will not change in this alternative. Hope Lake Trail, #424 is closed to travel with stock. Grazing and tethering of stock must be at least 200' from any lake.

Alternative C

Alternative C proposes a number of measures to minimize impacts of recreational use on the wilderness.

- Recreation Use Zones The Alternative has a mix of zones that are best understood by examining the tables zone maps. The distribution of zones is a mix which will result in less evidence of recreational use and impacts than does Alternative B.
- Group Size is lowered from the present 15 people to 20 head of stock to any combination of stock and people which does not exceed 16.

- Permits required in Alternative C are free, mandatory, self-issuing permits available at the trailhead.
- Campsites
- Campsite Density Alternative C has less Zone III and IV than Alternative B therefore it would have less campsite density. Because there is more Zone I than in Alternative B there would be more area without campsites. More naturalization would take place than in Alternative B.
- Barren Core Area With less Zone III and IV and more I and II than Alternative B, there would be fewer areas with a barren core area evident and fewer of them that reach the maximum size of less than 500 sq. ft. in the objective stated for Zone IV. Large campsites will be downsized and naturalization will take place to minimize barren core areas.
- Social Trails With less Zone III and IV and more Zone I and II than Alternative B, fewer social trails will be apparent than in Alternative B.
- Encounters will be lower than Alternative B because fewer Zone III and IV areas will exist and other measures will minimize encounters.
- Campfire Closures campfires will be prohibited within 1/4 mile of the following Lakes: Oreamnos, Sawed Cabin, Upper Phyllis, Upper Carpp, Surprise, Bear, Buck, Emerald, Lost Lakes, Lower Phyllis, Park Lakes, Sauer, Continental, Unnamed below Queener Mountain, and Unnamed west of Warren Lake. This will directly influence proliferation of campsites, barren core area, and a number of bio-physical factors. The areas targeted either have a shortage of firewood already or are essentially unimpacted by campfire scars. In either case the quality of the area will be improved by imposing a campfire closure. Campfire closures have more positive influence on the resource than any other single management action.

Resource Protection Facilities - Fewer resource protection facilities will be installed in this alternative, because of other actions which should reduce the number of visitors. It has less Zone IV so fewer areas are available for this approach to minimizing impact.

Stock Feed Requirements As in Alternative B certified weed seed free feed or pelletized feed is required.

• Stock Access and Containment - Camping with stock will be prohibited within 1/4 mile of Sawed Cabin, Oreamnos, and Ripple Lakes and Hope Lake Trail #424 will be closed to travel with stock. None of these lakes have appropriate areas for camping with stock. They are fragile and are already impacted by stock use.

Alternative D

This alternative has further restrictions put in place to minimize the impacts of recreation. This alternative is the most restrictive of the alternatives.

- Recreation Use Zones Examine the tables and zone maps to see the mix of destinations and trails in the various zones. It has the most Zone I and II and the least III and IV of any alternative.
- **Group Size** is smallest in this alternative. It is any combination of stock and people which totals 12. This is a limit which is common in many other places and seems to generally accommodate use patterns. It does decrease the number of riders to a maximum of 6. The maximum number of people hiking decreases to 12.

Permit requirements are the same as Alternative B&C except that any overnight stock use would require an agency issued permit. The intention of this requirement is to give an opportunity to place use in areas that are appropriate, are not already occupied by other stock users, and as an opportunity to share current concerns, trail conditions and techniques for minimizing stock damage.

Campsites

• Campsite Density varies with zone but because this alternative has the least Zone III and IV, density would be lower than in Alternatives A-C. Because there is more Zone I there would be more area without campsites. More naturalization would take place. Campsites will be least prominent in this Alternative and Alternative E.

Barren Core Area - Fewer barren core areas and those that exist will be smaller because of the actions associated with this alternative.

• Social Trails will be fewer in number because of other constraints in this alternative

Encounters with other groups should be fewer than under Alternative B and C due to increased restrictions and constraints.

- Campfire closures as listed in Alternative C as well as closures at Carpp and Lower Carpp. Ripple, Hidden, Kelly, Johnson, Tamarack, and Flower Lakes. Same justification as in Alternative C. This alternative simply takes a more restrictive approach with maximum emphasis on protecting the resource.
- Resource Protection Facilities. More restrictions will reduce the number of facilities needed.

- Stock Feed Requirements. Over night stock users will be required to pack certified weed seed free feed or pelletized feed.
- ♦ Stock Access and Containment will be the same as Alternative C except that Upper Seymour will also be included in the 1/4 mi. Setback for camping with stock. A stock camp does exist near Upper Seymour, it would still be available, and suggested, for stock camping.

Alternative E

This is the "permit" alternative. It differs from all other alternatives in that it requires an agency issued permit for all entry. Additionally, the permit could impose a quota system, i.e. limit overall numbers or numbers into a given area. Use quotas could be established by destination, or trailhead. The permit would revert to self-issuing during the "off-season" 11/15-5/30. In this case the restriction is "up front" outside the wilderness. There are fewer constraints inside the Wilderness.

- Recreation Use Zones The mix is virtually the same as in Alternative D. The way of achieving it is different. See the tables for the breakdown.
- Group Size is larger than both Alternative C or D, maximum of 12 people and 15 head of stock. This alternative has the flexibility of allowing large groups on occasion in areas which already have large camps because it provides up front control where there is more flexibility in this regard.
- Permits are required as discussed above.

Campsites

- Campsite Density objectives still exist for each Zone. Because of the permit system campsite density will be easier to control and will be less likely to increase.
- Barren Core Areas objectives for Zones still apply, impacts are easier to minimize with a permit system. Fewer areas will develop barren core areas because of displacement. Barren core areas tend to decrease in size as well as frequency of new occurrence.
- Social Trails have associated objectives with each Zone which will be easier to attain with a permit system.
- ♦ Campfire Closures same as in Alternative C. Campfires will be prohibited within 1/4 mile of the following Lakes: Oreamnos, Sawed Cabin, Upper Phyllis, Upper Carpp,

Surprise, Bear, Buck, Emerald, Lost Lakes, Lower Phyllis, Park Lakes, Sauer, Continental, Unnamed below Queener Mountain, and Unnamed west of Warren Lake.

- Resource Protection Facilities Will not be increased. Same as current.
- ◆ Stock Feed Requirements same as A, B, and C. No requirement to pack feed for overnight stock users.
- ♦ Stock Access and Containment no change from current regulations. If stock use causes damage in a given area it could be controlled when issuing permits.
- New Outfitting permits would not be issued if public is limited by quotas.
- Current Outfitters would have no increases in use days in areas where quotas are imposed on the public.

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		TABLE I - C	ONDITIONS BY ZO	NE	
INDICATOR	ZONE I	ZONE II	ZONE III	ZONE IV	Std./Obj.1
Campsite Density	<1/roving mi.	<3/roving mi.	<6/roving mi.	<8/roving mi.	Objective
Barren Core Area	Short-lived	<100 sq.ft.	<200 sq.ft.	<500 sq.ft.	Objective
# Social Trls./camp	Generally 0	Generally<2	Generally<3	Generally<5	Objective
# Other Social Trls.	Generally 0	Generally<2	Generally<3	Generally<3	Objective
Encounters per day (trail)	Generally 0	Generally<2	Generally<3	Generally<5	Objective
Encounters per day (camp)	Generally 0	Generally<2	Generally<4	Generally<4	Objective
Administrative and Permitted Camps, (base or spike camps)	Not to exceed 15 service or use days per season per site	Allowed as needed for specified in operating	Standard		
Permanent Structures, (other than Heritage)	no	RESOURCE PROTE	Standard		
Examples of Structures	none	Water bars, turnpike	Standard		
FS System Trails	None	Secondary & way trails only	Mainline, secon	racks dary and way	Standard
Trail Signs (directional)	no	yes	yes	yes	Standard
Non-System Trails	Discourage in all	zones. Eliminate when	and where possible	1.	Objective
Existing Grazing Allotment	no	no	yes	yes	Standard
Noxious Weeds	Noxious weeds w	Objective			
Fish stocking	In cooperation we conditions. Fish guidelines stated following criteria indigenous special threatened or end	Objective			
RNA's	RNA establishme	nt is not tied to zone de	esignation.		NA

1 Standard or Objective associated with this indicator. (< = less than)

ACTIONS				ALTERNATIVE D	ALTERNATIVE E
Group Size	Current 15/20	Same as current, 15/20	Any combination of people and stock, up to 16	Any combination of people and stock up to 12	Permit Controls, Max, 12/15
Permits	Special Use Permits are the only permits required.	Require self-issuing permit of all users. (Year-round requirement)	Require self-issuing permit of all users, (year-round requirement)	Same as C plus an office issued permit would be required for all overnight stock use.	Establish permit system, (not self-issuing), with use quotas by trailheads or destination area. Note: Permit reverts to self-issuing during "off-season", (11/15-5/30).
Campsites	No change; naturalize new campsites to slow proliferation of campsites	Allow more areas to have recognizable campsites. Some naturalizing will still occur. More large sites will be retained.	Continue to naturalize new campsites and downsize large campsites.	Campsites may be designated in some areas; some areas may be closed to camping: Inlet of Edith	May allow more flexibility than C and D.
Campfires	No Restrictions, encourage use of stoves or dead and down wood only	Same as A.	Campfire closures w/i 1/4 mile of the following lakes: Oreamnos, Sawed Cabin, Upper Phyllis, Upper Carpp, Surprise, Bear, Buck, Emerald, Lost Lakes, Lower Phyllis, Park Lakes,	All areas listed in C plus: Carrp Lakes, Ripple, Hidden, Kelly, Johnson, Tamarack, Flower	Same as C.
			Sauer, Continental, Unnamed, below Queener Mtn., Unnamed, west of Warren Lake.		
Resource Protection Facilities	No Change, have toilet and hitching rack at Mystic. Hitching rack top of Hope Lake Trail.	Place facilities such as hitch racks, toilets, etc. for resource protection. Possible sites: Johnson Lake, Carrp Lakes, Ripple, Hidden Lake, Mystic Lake	Fewer resource protection facilities than Alt. B. Possible sites same as Alt. B. Placement of facilities would be done only if a serious deterioration of resources	Fewer new facilities. Further restrictions in lieu of facilities to prevent resource damage.	Same as Alt. A.
Trails	purposes, will be allowed or	n existing trails. Abandoned p where possible in all alternativ	portions of trail will be naturali	on of short stretches for resource zed. Social trails and other use a frequent use may be left in pla	er-built trails will be

ACTIONS	ALTERNATIVE A (No Action)	ALTERNATIVE Be	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
Stock feed requirements	Weed seed free feed requiren Intensify education efforts to in the A-P. Advise stock use appropriate containment of ste	o insure that the public decreases to pack feed, preferably	oes not expect to find forage	Require overnight stockusers to pack feed.	Same as A, B & C.
Stock access and containment	No Change, Hope Lake Tr. # 424 Closed to Travel with Stock. Hitchracks will be provided as per "facilities", above. Emphasize appropriate stock containment.	Same as A.	In addition to A & B, prohibit camping with stock within 1/4 mi. of Sawed Cabin, Oreamnos, and Ripple Lakes.	Close additional area to camping with stock, w/i 1/4 mi.: Upper Seymour.	Educate and regulate by permit. Hope Lake closure would remain.

Note: STOCK is defined as horses, mules, burros, llamas or goats.

	TABLE	II - ACTIONS BY ALT	TERNATIVE - OTHER	ISSUES	***
ACTIONS	ALTERNATIVE A (No Action)	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
New Outfitters	No Change	bio-physical impacts; 2) the use is non-traditional, not on limited to, such uses as dogs	dered if: 1) the use will not of use cannot be filled by current e of the current permitted use sledding or winter ski tours. It by the Forest Service and wor	nt outfitters and; 3) The new s. This includes, but is not f these conditions are all met,	If the public is limited by quotas new outfitting permits will not be issued.
Current Outfitters	No Change	10 year actual use high, as sl 50 use days, if demand is the Operating plans will determi progressive and drop camps decisions will focus on improwhere they are fully acceptal the public also apply to outfi NF and 16-day limit on the El 4 or 16 day limit can be expensed.	nown in Table V, of Chapter I are and monitoring shows that the appropriate location and us within guidelines and standard oving conditions where needed blc, based on zone criteria. It ters with the exception of the	impacts are acceptable. se levels of base, spike, ds set for each zone. Such d and maintaining conditions All regulations which apply to 14-day limit on the Bitterroot the case of assigned sites, the especial use permit in the	No increases in outfitter use days in areas where quotas are imposed on the public.

	TABLE II - ACTIONS BY ALTERNATIVE - OTHER ISSUES							
ACTIONS	ALTERNATIVE A (No Action)	ALTERNATIVE Be	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E			
Fish Stocking	No Change	lakes will be stocked. Proprotection of those streams Stocking will follow goals when either of the following by human influence, or 2)	na Fish, Wildlife and Parks (Movide lishing recreation where as where known or suspected puss, objectives and guidelines in a criteria is met: 1) to re-estal to perpetuate or recover a threitional means instead of helico	ppropriate. Management dec re strains of West Slope Cutth Chapter II, pages 31-33. Sto blish or maintain an indigenou ratened or endangered species.	cisions will focus on roat or Bull Trout exist. cking could be considered species adversely affected			
Research Natural Areas, (RNA'S)	No Change, the pRNA's would remain "proposed" in Forest Plans	RNA's, proposed in the F on the Bitterroot NF, will monitoring, especially of t and sensitive species are n; 2) eliminate noxious we within the RNA's; 4) sp is necessary; 5) avoid stag camps, contractor or admin	orest Plans for Goat Flat, on the established with any alternathe trail corridor and any existing of disturbed by human activity seds as specified in following grecial attention to sensitive specifing for firefighting, including mistrative camps within the RN	ne Beaverhead-Deerlodge NF, native. Guidelines for RNA's wang campsites to make certain to or displaced by exotic species guidelines; 3) naturalize any make cies and associations if any tra- repeated helicopter landings;	vill include: 1) active he vegetation associations t, particularly noxious weeds lew campsites which appear il relocation or reconstruction 6) do not allow spike or base			
Noxious Weeds	Current A-P direction does not address noxious weeds. Forest plan direction does not address weeds in wilderness.	associated with special use permits w/i the RNA.'s. A combination of education, detection, prevention, and eradication methods will be used to prevent weed infestations before they occur and to eliminate infestations while they are still minimal. Existing inventoried noxious weeds, (one acre, Kurtz Flat, knapweed), will continue to receive follow-up treatments as needed per the 1994 BNF Noxious Weed EA. New infestations of noxious weeds will be eradicated as soon as possible after being inventoried. Eradication will be done by handpulling or biological control if possible, otherwise, by using the most appropriate herbicide available. Herbicide applications will be site specific and only by hand, to minimize effects on non-target species.						
Mystic Cabin	Current A-P direction specifies the cabin will be phased out	Register of Historic Places In the event of wild or pres	nined the cabin has historic imple. It will not be phased out and scribed fire in the vicinity of the "fire-proof" the cabin through	I measures will be taken to pro e cabin, measures will be take	otect and stabilize the cabin. on to protect the cabin from			

INDICATORS	ALTERNATIVE A (No Action)	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E	
Campsite Density	No Standards or Guide- lines in Current Plan	Varies by Zone from <1/row	ring mi. in Zone I to <8/roving	mile in Zone IV.		
Barren Core Area	No Standards or Guide- lines in Current Plan	Varies by Zone from "short-lived" to <500 sq.ft.				
Social Trails/camp	No Standards or Guide- lines in Current Plan	Varies by Zone from genera	lly < 1 to < 5.			
Social Trails/other	No Standards or Guide- lines in Current Plan	Varies by Zone from genera	lly 0 to < 3.			
Encounters/day	No Standards or Guide- lines in Current Plan	Varies by Zone from generally 0 to generally < 4 groups per day.				
Administrative and Permitted Camps	No Standards or Guide- lines in Current Plan		ys in Zone I. Permissible in o			
Permanent Structures (Other than Heritage)	Currently a hitching rack and toilet at Mystic, past structures at Johnson and Ripple.	None permissible in Zone I. waterbars, or puncheon. Zo protection under some Alter	nes III and IV may have occas	in other Zones. Zone II has o ional hitchracks or toilets as de	only trail structures such as semed necessary for resourc	
FS System Trails	Current plan, no new system trails.	for resource protection or sa	fety purposes, will be allowed ondary trails. Zones III & IV r	e. Reconstruction, including ron existing trails. Zone I doe nay have mainline or secondar	s not contain system trails.	
Non-system Trails	Not addressed in current plan			and eliminated where possible	in all alternatives.	
Trail Signs (directional)	No Change	Directional signs at trail june	ctions in zones Il-IV. No signs	s in Zone I.		
Fish Stocking,	No Change	main so. Stocking will following when either of the following cies adversely affected by h	ow the goals, objectives and gu g criteria are met: 1) a clearly out to perpetua	e towards more natural conditi- idelines in Chpater II, pages 3 defined need to re-establish or a te or recover a threatened or ea	-33 and will be considered maintain an indigenous spe-	
Existing Grazing Allot- ments	No Change	No Change. Allotments exi	st only in Zone III or IV.			
Noxious Weeds	No Change	Noxious weeds will be prev	ented and eliminated when and	l where possible.		
Outfitter and Guides	No Change	Outfitters will meet objectives, standards, guidelines according to Zones. Operating plans will provide specifics. No permanent structures or caches will be allowed.				
New Regulations	No Change	Regulations change according to Alternative, including group limit, permit requirements, campfire closures, access changes, stock feed				

The following table lists lakes, trails and other areas which are frequently used for recreation. Such use influences an adjacent area. The heavier the use in an area the larger the area that is influenced. Geographic features also influence the size of the area that receives impact. The intention of this table is to show an approximation of the area where one might expect to see some impacts as the result of human use.

TABLE IV - ZONES DESIGNATED FOR LAKES, TRAILS AND ADJACENT AREAS, BY ALTERNATIVE

AREAS, BY ALTERNATIVE							
			1.33				
Alpine Lakes	I, none	I, none	I, none	I, none			
				I, none			
				I, none			
"Little Annie"(T3N R16W Sec 35)	I, none	I, none	I, none	I, none			
Lost Lakes	I, none	I, none	I, none	I, none			
Lower Phyllis	I, none	I, none	I, none	I, none			
Park Lakes	I, none	I, none	I, none	I, none			
Sauer	I, none	I, none	I, none	I, none			
Continental	I, none	I, none	I, none	I, none			
Unamed, below Queener Mnt.	I, none	I, none	I, none	I, none			
Unnamed, West Warren Lake	I, none	I, none	I, none	I, none			
"Annie", (T3N, R15W Sec 16)	П, 500'	II, 500	I. none	I, none			
Bear	П, 500'	II, 500'	П, 500'	П, 500'			
Crystal	П, 500'	II. 500'	П. 500'	П, 500'			
Flower		II, 500'	II. 500'	П, 500'			
Hicks	1	П. 500'	I, none	I, none			
La Marche		I, none	I, none	I, none			
Lion, (W.Fk. Thomp.)		II, 500'	П, 500'	II, 500'			
Little Johnson	II, 500'	II, 500'	II, 500'	П, 500'			
Page	II, 500'	II, 500'	II, 500'	II, 500'			
	П, 500'	I, none	I, none	I, none			
	П, 500'	П, 500'	П, 500'	П. 500'			
Upper Carpp	II, 500'	П, 500'	П, 500'	П,500'			
Mystic	Ш, ¼ mi.	III, ¼ mi.	III, ¼ mi.	III, ¼ mi.			
Oreamnos	III, ¼ mi.	II, 500'	П, 500'	П, 500'			
Rainbow	III, ¼ mi.	III, ¼ mi.	II, 500'	П, 500'			
Ripple	III, ¼ mi.	III, ¼ mi.	II. 500'	П, 500'			
Tamarack	III, ¼ mi.	II, 500'	II, 500'	II, 500'			
Upper Phyllis	Ш, ¼ mi.	III. ¼ mi.	III. ¼ mi.	III. ¼ mi.			
Warren	III, ¼ mi.	III, ¼ mi.	II, ¼ mi.	II, ¼ mi.			
Queener Pond (Horse Camp)	III, ¼ mi.	II. 500'	II, 500'	П, 500'			
Норе	III, 500 '	III, 500'	II, 500'	II, 500'			
Martin	III. 500'	III, 500'	П. 500'	П. 500'			
Carpp	IV, ¼ mi.	IV, ¼ mi.	III, ¼ mi	III, ¼ mi			
Edith	IV, ¼ mi.	IV, ¼ mi.	III, ¼ mi.	III, ¼ mi.			
Hidden	IV, ¼ mi.	III, ¼ mi.	III, ¼ mi.	III, ¼ mi.			
Ivanhoe	IV, ¼ mi.	IV, ¼ mi.	III, ¼ mi.	III, ¼ mi.			
Johnson	IV, ¼ mi	IV, ¼ mi	IV, ¼ mi	IV, ¼ mi			
Kelly	IV, ¼ mi.	III, ¼ mi	III, ¼ mi.	III. ¼ mi.			
Carpp		H - 17	IV, ¼ mi	IV, ¼ mi			
Upper Seymour			III. ¼ mi	III, ¼ mi			
FRITTIE VIOLEN							
			H W mi	II 1/ mi			
Elk Park	II, ½ mi.	II, ½ mi.	II. ½ mi.	II, ½ mi. III, ½ mi.			
Hidden Lk. Jct. Mdw.	III, ½ mi.	III, ½ mi.	III, ½ mi.				
Kelly Lake Meadows	III. ½ mi.	III. ½ mi.	П, ½ mi.	II, ½ mi. II, ½ mi.			
Mystic Horse Camp	III. ½ mi.	III, ½ mi.	II, ½ mi.	II, ½ mi.			
Pintler Meadows	III, ½ mi.	III, ½ mi.	II. ½ mi.	II, ½ mi.			
Buck Ridge Meadows	III, ½ mi.	III. ½ mi.	II. ½ mi.	II, ½ III. IV, ½ mi.			
Johnson Horse Camp	ΓV, ½ mi.	IV, ½ mi.	IV, ½ mi	1 V , 72 IIII.			

TABLE IV - ZONES DESIGNATED FOR LAKES, TRAILS AND ADJACENT AREAS, BY ALTERNATIVE

AND BURNESS			
Zone II	Zone II	Zone II	Zone II
Zone II			Zone II
Zone II	Zone II	Zone II	Zone II
Zone II	Zone II	Zone II	Zone II
Zone II	Zone II	Zone II	Zone II
Zone II	Zone II	Zone II	Zone II
Zone IV	Zone IV	Zone III	Zone III
Zone III	Zone III	Zone III	Zone III
Zono m	2010 111	Zone III	Zone III
Zone II	Zone II	Zone II	Zone II
		20114 12	20.00
Zone II	Zone II	Zone II	Zone II
			Zone II
7			Zone II
Zone II			Zone II
- Done ii			Zone II
Zone II			Zone II
			Zone II
Zone n	Zone n	Zone n	Zone n
Zono II	Zono II	7one II	Zone II
			Zone II
			Zone II
Zone II	Zone II	Zone II	Zone II
7	7	7	7 11
Zone u	Zone II		Zone II
7 11	7 11		Zone II
			Zone II
			Zone III
Zone III	Zone III	Zone III	Zone III
			14
- III	7 777	7 777	7. 111
			Zone III
	Zone III		Zone II
Zone III	1 7		Zone III
7 			Zone III
			Zone III
	+		Zone III
	+		Zone III
			Zone II
Zone III	Zone II	Zone II	Zone II
Zone III	Zone III	Zone III	Zone III
Zone III	Zone II	Zone II	Zone II
Zone IV	Zone IV	Zone III	Zone III
			Zone III
			Zone IV
			Zone IV
	- 		
			Zone III
Zone IV	Zone III	Zone III	Zone III
	Zone II Zone III	Zone II	Zone II

TABLE IV - ZONES DESIGNATED FOR LAKES, TRAILS AND ADJACENT AREAS, BY ALTERNATIVE

nach in the same and the same a	dreskar deski sigelije			
#41 Storm Lake (beyond pass to #9)	Zone III	Zone III	Zone III	Zone III
#97 Edith Lake	Zone IV	Zone IV	Zone III	Zone III
#433 East Fork (Bitterroot)	Zone IV to Star Falls, III beyond			
#435 McCart-Johnson Pk.	Zone IV to Lookout, III beyond			
# 96 Johnson Lk.	Zone IV	Zone IV	Zone IV	Zone IV

NOTE: For planning purposes, area influenced is calculated at 200 'each side of the trail.

CHAPTER III - AFFECTED ENVIRONMENT

Introduction

This chapter discusses those elements of the existing condition that may be affected by proposed actions. The existing condition and zone map show what exists in the A-P at this point in time. It is important to remember that this document is primarily programmatic and proposed actions are those that minimize recreational impacts on the Wilderness.

Soils, Vegetation, and Natural Appearance

Soils are relatively undisturbed by human activity with the exception of the actual trail tread, camp sites, or other use areas. In these areas there is some small scale compaction and erosion. Campfires remove organic material from soil building cycles, sterilize the soil, create compacted soils in the fire vicinity, remove wood from the ground and change the micro-climate for new plant growth.

Vegetation is influenced by recreation in a number of ways. Campsites, trail corridors and other use areas often have some degree of trampled vegetation. In some cases, these impacts are increasing in severity and/or proliferating. Over the years, additional areas look "bare", "worn", and "hammered". These changes occur because of multiple factors. Areas around camps are subjected to repeated walking, sitting, tenting, and sometimes stock containment. Historic use has created large campsites in a few areas. Trail corridors often become wider or braided because people and stock step out of the trail tread, particularly when traffic is heavy or large groups are encountered. Social and user-built trails contribute to degradation by creating pathways into draomages wothout trails, around lakes, between campsites, to vista points, and in other areas where use is repeated or concentrated. Wood gathering activities, finding a toilet area, scrambling down steep banks for water or fishing access, and traveling to adjacent campsites all create social trails and widened areas of impact. Trees in camp areas are often devoid of lower branches and have been scarred or killed by wood-gathering for campfires, as well as improper stock containment techniques. District files have trail logs, campsite inventories, and similar information which show the extent and trends of these conditions

In some cases, foraging of recreational stock may cause severe negative impacts in areas where there is overuse. These impacts include such things as trampled or overgrazed vegetation, erosion, damage to trees, introduction of noxious weeds, and damage to aquatic systems. Riparian areas are especially critical since overgrazing can severely affect aquatic systems. Few impacts of this nature occur in the Wilderness at this time. In the 1930's higher elevations had sheep grazing allotments. Today, no sheep allotments exist and there is only one cattle allotment, in the Pintler Meadows area.

The proposed actions will change impacts on vegetation by changing those factors which especially contribute to vegetative disturbance.

The biological environment is virtually unmodified with the exception of small scale vegetation change or temporary wildlife displacement because of recreation activities.

Wilderness Experience

Human use is increasing in the Anaconda-Pintler because of the rapid population growth in western Montana as well as publicity it has received as an "undiscovered" Wilderness. Use is concentrated around destinations, especially lakes, that are closest to the population centers of Butte, Anaconda, Missoula, and the Bitterroot Valley. Trends indicate an increase in use from out-of-state visitors as well as from the Bozeman and Flathead Valley areas. The geography of the A-P makes it especially appealing for day use and short trips since nearly any location within the wilderness is accessible from a trailhead in a day. Although accurate use figures for the A-P do not exist, the use trends are unmistakable. This is evidenced by increased vehicles at trailheads, increased encounters in the Wilderness and increased impacts in areas that did not previously have impacts.

As discussed in the section under vegetation, some areas are showing the impacts of recreation. These impacts, in turn, influence the recreation experience by changing the appearance of an area in a way that makes it seem less wild. Most visitors expect to see some signs of prior use when they go to popular destinations. Even though people's expectations vary, it is reasonable to expect that a wilderness area should look and feel natural without an inordinate amount of human impact. Wilderness is not characterized by a "worn" or "marred" look. For most visitors crowding itself makes an area seem less natural. Recurring noise, distraction, and the visual impact of other groups makes an area feel less wild. The number, size, and behavior of groups changes the experience for those around them. Numerous other groups, particularly large ones, whether on the trail or in campsites, detract from the wilderness experience. Many people go to wilderness in hopes of an opportunity for solitude and reflection, for quiet sharing with others, discovery, adventure or challenge. If the situation is such that it seems like "there are people everywhere" these opportunities, so characteristic of what most people want and expect from wilderness, are diminished.

The most heavily used areas are Johnson Lake, Carpp Lakes and other lakes in the north central portion of the wilderness. These lakes, for the most part have short, relatively easy approaches and are very scenic. Seymour and Hidden Lakes receive a moderate amount of use while all lakes with trails to them, especially those that are close to trailheads or part of loop options, are visited on a regular basis. Summer use is a mix of day hiking, backpacking and both day and overnight stock use. Portions of the Wilderness without trails are essentially undisturbed but indications are that use in these areas is also increasing.

Because the A-P is a narrow area it is easily accessible on short trips. Despite easy accessibility there is still ample opportunity to find those qualities which exemplify the

Wilderness experience: solitude, challenge, observing natural processes, a relatively pristine environment, wildlife viewing, spectacular vistas and a natural diversity of vegetation which includes a multitude of wildflowers.

The A-P Wilderness has approximately 280 miles of trail including a 45 mile section of the Continental Divide National Scenic Trail. Fishing is an important summer activity. Fall use is predominately hunting and often involves stock use. Outfitters, both summer and fall, account for approximately 10% of the total use. The most active outfitter provides backpacking trips. Traditional hunting and fishing outfitters are a smaller percentage of the outfitted use. Annual use is currently estimated at 26,426 recreation visitor days, (RVD's). An RVD is 1 person for 12 hours)

Management Actions Influencing Human Use

Current management influencing human use includes education and information outreach from offices, bulletin boards, signs, maps, and visitor contacts in the field. This includes emphasis on "Leave No Trace". Field presence of wilderness and trail personnel, regulations, trail condition and placement of facilities all reflect management priorities and influence human impacts and use.

Field presence has improved over the long run but has been declining the last several years due to budget constraints. A field presence increases education, prevents impacts, provides better law enforcement, increases naturalization of sites, provides quick action on problem areas discovered during monitoring, improves trail conditions and other management.

Standard regulations such as the requirement for special use permits for outfitters, apply. Regulations include those common to all wilderness areas, e.g. prohibition on motorized vehicles or equipment and bicycles. The following are current regulations for the Anaconda-Pintler:

Group Size Limit of 15 people and 20 head of stock

Camping Limit of 14 days on the Bitterroot NF and limit of 16 days on the

Beaverhead-Deerlodge NF

Certified weed seed free feed requirement

Grazing and tethering of stock set-back of 200' from all lakes required

Prohibition of caching

Camping closure between trail and lake at Johnson Lake

Hope Lake Trail #424 closed to travel with stock

Trails are maintained on a regular basis. A mix of primary and secondary trails exist. Almost all are open to stock use though some are more suitable than others. The exception is the trail to Hope Lake. Hope Lake Trail is unsafe for stock and the lake area is not suitable for camping with stock or tethering stock. Over the past 20 years, heavy maintenance and reconstruction have improved many trails, however, some problem areas remain and others develop from time to time when use becomes heavy or adequate maintenance is not possible. User-built trails are discouraged and rehabilitated when possible. Facilities are very minimal, hitching racks are at the top of the Hope Lake Trail and at Mystic Lake.

Outfitter and Guides

The A-P has outfitters on all districts. Some are the traditional stock supported operation which is primarily hunting and fishing. Others are a mix of fall hunting and summer use. The largest outfitter in the A-P outfits backpacking trips of which the A-P provides a portion of the experience for his clients who are on extended trips.

The size, shape, and geography of the A-P make almost any part accessible from a trailhead, in a day, on foot. Risk, difficulty and distances in the A-P are not such that they generate a high need or demand for outfitted services. Reported use days by existing outfitters are currently lower than their allocated use. Considering these factors it is important that available sites along popular routes or in popular destinations be available to both outfitted and non-outfitted groups. It is not desirable that all large, impacted sites be occupied by outfitted use the majority of the time.

A number of public responses indicates that they do not want to see the condition of the Anaconda-Pintler degrade nor do they want to see more groups, more outfitted use or a proliferation of campsites. Impacting additional areas by repeated use or with large groups causes the wilderness condition to deteriorate. Displacement of one group by another often creates additional impacts. The aim of this new direction will be to prevent deterioration.

The A-P has limited capacity to absorb a large number of groups. Loop trips and options for extended trips are limited. Large, impacted campsites are not numerous. Campsites suitable for stock are relatively few.

Outfitting use in the Anaconda Pintler Wilderness is summarized in Table V of this Chapter, on page 87. Currently there are six permitted outfitters operating in the A-P. Of the six outfitters, 5 use stock. A brief summary of the operations follows. Further information is contained in the project file.

Under Wild Skies

This outfitter operates on both Philipsburg and Wisdom Districts. His base of operations is out of Moose Lake on the Philipsburg District. The operation is a mix of summer and fall stock use. It offers a combination of day and overnight trips. Summer day use is building, particularly from the lodge at Moose Lake to lakes in the A-P.

Hunting use is primarily on the Wisdom District with a base camp just outside the A-P on Thompson Creek. Use on the Wisdom District was capped by an Environmental Assessment signed in 1993. It says: "In and adjacent to the Anaconda-Pintler Wilderness, a permit reissuance of an existing permit would authorize 30 service days for summer trips, and 130 service days for bow and rifle season trips, all of which would be stock-based. These trips would occur on the West Fork Thompson, Plimpton Creek, Continental Divide and Mystic Lake trails. Trips would be day-use and overnight."

In addition to the two base camps outside the A-P, this permit has the following potential assigned camps: Cutaway Mountain, Bear Lake, Big Johnson, Carrp Creek Trailhead, Little Annie, Edith Lake, Little Johnson, Tamarack Lake, One Hundred Acre Meadows, and Upper Phyllis Lake.

This permit has changed hands 4 times in the last 10-12 years, the current permit holder has had the permit since 1995. Under Wild Skies is the only outfitter allowed to operate in the Anaconda Pintler, on Philipsburg District, during hunting season. He operates both in and out of the A-P, summer and fall. He is building his business.

Big M Outfitters

Big M, on Philipsburg District, is permitted to operate in the A-P during the summer months only. Use specifically for the A-P has only been reported separately since 1995. Use is either trail rides, day use or pack trips which may or may not include fishing. Big M has 20 priority service days for summer use in the A-P but usually has not used that much. Highest use to date has been 1997 with 22 service days. This permit does not have assigned sites in the A-P but occasionally uses spike camps.

LaMarche Creek Outfitting

La Marche Cr. Outfitting operates on Wise River District. The operation involves hunting with stock for both day and overnight use. The permit has changed hands several times in the last ten years. Use has steadily declined since the early '90's. The current owner has had the operation for several years. Day use is now more prevalent than overnight. Potential assigned camps are: East Fork La Marche, Trout Creek, McGlaughlin, and Mudd Lake.

Sundance

Sundance Lodge, operates a small operation out of Sundance Lodge on the Wise River District. It involves day rides only. Sundance Lodge is permitted for summer day use where visitors take day rides out of a lodge. Most of the rides are on National Forest but outside of the A-P. Sometimes part of the ride goes into the A-P. No overnight use is permitted in the A-P and there are no assigned camps associated with this permit. The permit has changed hands once in the last 10 years.

East Fork Outfitters

East Fork Outfitters operates on the East Fork of the Bitterroot. The operation utilizes stock for both summer and fall hunting use. Fall use is still the bulk of the business but summer use seems to be expanding. Use is primarily overnight. The business has changed hands several times in the last ten years. A small base camp exists at Clifford Creek just off the East Fork. Additional potential reserve sites are Kelly Lake, Kurtz Flat, Hidden Lake, Buck Ridge Meadows, and Alpine Meadows.

Wilderness Ventures

Wilderness Ventures is the only backpacking outfitter in the A-P. This operation involves summer, overnight, backpacking for young adults. This operation has the highest number of service days in the A-P, well over half the total days in the A-P. They have consistently used all their priority use days. They operate primarily on Wise River District but do travel throughout the A-P. They do not have assigned camps but use is approved in areas utilized on a repeated basis. Their method of operating is progressive camps. Trips are usually of 5 days in duration with an average of 12 people. The A-P trips are only a portion of longer trips which they conduct.

Institutional Outfitters

Requests for institutional use of the A-P are not uncommon. Groups such as universities, schools, clubs, religious organizations, camps, rehabilitation centers and special interest groups make requests. The group limit, currently 15 people and 20 head of stock, applies to all institutional groups regardless of whether they are commercial or private. If an operation is commercial some incidental use days may be approved under special use permit for institutional outfitters. Institutional outfitters are encouraged to use areas outside the A-P.

Noxious Weeds

The Anaconda-Pintler Wilderness is almost entirely free from noxious weeds except for a few locations along the East Fork of the Bitterroot. In that vicinity the most common noxious weed is spotted knapweed, *Centaurea maculosa*. The primary area of infestation is in the vicinity of Kurtz Flat, approximately four miles up trail #433. There are several small patches of Canadian thistle, *Cirsium arvense*; one in the Kurtz Flat vicinity, on the south side of the river, and others down stream along the river. There have been a few isolated occurrences (only a few plants) of sulfur cinquefoil, *Potentilla recta*; and St. John's Wort, (Goatweed), *Hypericum perforatum*; these have been hand pulled. There is an ongoing knapweed eradication effort in and around the Kurtz Flat area. The area was treated by hand pulling and grubbing for about fifteen years. These eradication efforts were not fully effective. In 1994 an Environmental Assessment was completed. In 1995, initial, limited, hand spraying, began. This spot specific herbicide treatment involved a total infested area of approximately two acres in size. Small scale follow-up treatment was undertaken in 1996 and 1997. Hand pulling has also continued.

At the present time there are some plants scattered throughout the treatment vicinity. Remnant seed in the area will require regular monitoring and annual spot treatments for the next 5-7 years, after which the area should be totally weed free.

The habitat types found within the A-P vary widely, but for the most part they are timber-dominated habitat types. There are a few scattered native grasslands which are classified as a bluebunch wheatgrass/Idaho fescue habitat type in the lower elevations. Additionally, in the lower elevations there is also a substantial amount of ponderosa pine/ bluebunch wheatgrass habitat type.

The bluebunch wheatgrass/Idaho Fescue native grassland habitat types and the more open, (less than 30% crown cover) ponderosa pine/bluebunch wheatgrass habitat types of this wilderness are very susceptible to noxious weed invasion. Spotted knapweed, sulfur cinquefoil, and goatweed have recently begun to encroach on many areas adjacent to the Wilderness.

Since 1992, there has been a certified "weed seed free feed " requirement in the entire A-P. This is an attempt to curtail any noxious weed seeds from coming into the wilderness via horse feed.

Trailheads and roads leading to the wilderness have received special attention and in some cases hand-pulling and/or herbicide treatment has been undertaken to prevent the spread of weeds into the wilderness. Wilderness rangers and members of the public have routinely pulled isolated weeds along the trail or at trailheads.

Ongoing education efforts on weed identification and methods of preventing the spread of weed seeds have been undertaken on all Districts.

Fish

In recent years there have been concerns expressed about the practice of stocking lakes in Wilderness. These concerns involve the changes that occur when naturally fishless lakes are stocked. Of added concern is the need to maintain native species. Bull trout and native West slope Cutthroat are native in drainages west of the Continental Divide, and genetically pure east slope strains of West-slope Cutthroat exist in some places east of the Continental Divide. There is no hatchery brood stock for the East slope strain of West slope Cutthroat. Stocking itself has changed some lakes however, there is no way of assessing those changes since stocking began in some areas over 50 years ago. No baseline data exists.

There have been numerous discussions, over a number of years, between Montana Fish Wildlife and Parks and the Forest Service concerning fisheries management in the high lakes and streams of the Anaconda-Pintler. The numerous administrative units and individuals involved in both agencies sometimes have complicated these discussions. Initial scoping has indicated a willingness and need to develop a fish management strategy that maintains or moves towards more natural conditions within the Wilderness.

The Anaconda Pintler has 42 lakes named on the map. Of this total, approximately 17 support fish populations. Many of these populations are self-sustaining. Table VI, on page 89, summarizes lakes and fish populations, compiled from numerous documents. Lakes listed as having fish in Table VI, page 89 are lakes the Montana Department of Fish, Wildlife and Parks currently stock or have been stocked in the past. Some of the lakes like Rainbow, Crystal, Lion, Mystic, and Upper Seymour Lakes all have self sustaining populations of rainbow trout and are no longer stocked.

Fish populations, in streams are summarized by District, as follows:

Philipsburg Ranger District

Species of Salmonids. No genetic test results on any of the streams so information is based on the professional opinion by fisheries biologists. Data sources for this information include the Montana River Information System, MFWP stocking records and lake inventory results, talking with local Mt. Fish Wildlife and Parks fisheries biologists, and field sampling efforts.

The information is organized by stream name and relative abundance of each species within each stream, beginning at the western end of the Wilderness and progressing eastward. Some of the streams are outside of the Wilderness boundary, but are included because they drain portions of the A-P.

Copper Creek

Eastern brook trout (EB): Most prevalent species, resident population.

Westslope cutthroat trout (WCT): Common, presumed pure although rainbow trout (RB) were historically planted downstream.

Bull trout: Uncommon, stream provides spawning for fluvial population and rearing habitat for juveniles. Some hydridization with EB likely, but has not been documented.

Meyers Creek

Bull trout: Common. Meyers Creek is confirmed as a spawning tributary for fluvial Bull trout from Rock Creek population. Provides substantial rearing habitat for juveniles.

Westslope cutthroat trout: Uncommon. Fisheries biologist assumes they are a genetically pure resident population although RB have been planted in the Middle Fork in the past.

Middle Fork Rock Creek

Bull trout: Common. Upstream of confluence with Copper Creek is one of most important Bull trout spawning areas in Rock Creek. Some spawning activity within Wilderness. Important rearing area.

Westslope cutthroat trout: Uncommon. Assuming these are genetically pure, even though RB have been planted downstream and generic "cutthroat trout" have been planted in both upper and lower Phyllis Lakes, due to the length of time it has been since stocking and subsequent stocking with WCT.

Carpp Creek

Bull trout: Common, high value as spawning and rearing habitat for Rock Creek population.

Westslope cutthroat trout: Common in upper reaches, uncommon elsewhere. Maybe pure, although generic cutthroat trout planted during the 40s and 50s in stream. Self-sustaining population of RB in unnamed lake in Tamarack Creek drainage, ("Little Annie"?) persist and likely inhabit Tamarack Creek. These fish could be a potential

source for hybridization in this drainage, but the cutthroat trout in Carpp Creek look good. The unnamed tributary draining Carpp Lakes might contain pure WCT.

East Fork Rock

Bull trout: Common. East Fork reservoir contains an adfluvial population of Bull trout which run up the East Fork to spawn and rear. This is very high value Bull trout watershed. East Fork Rock is a water quality limited stream.

Cutthroat may not exist here. Snorkel surveys in the wilderness, summer of 1997, failed to detect CT. RB have been planted in the reservoir and the fish there look like RBxCT hybrids, however, are likely Arlee strain RB. Historically RB and CT have been planted in upstream lakes (Page - RB & CT, Sauer - CT).

Eastern brook trout: Uncommon in reservoir, but self sustaining. Spawning EB observed in Wilderness portion in 1996.

Storm Lake Creek

Cutthroat trout: Common in stream below the lake and the only known species in Storm Lake. Spawning does occur above the lake, outside the wilderness. RB historically planted in the lake, with CT planted more recently, and WCT most recently. Questionable if CT are pure.

Bull trout: Uncommon downstream of Storm Lake. Not found in lake or above. This is an isolated population that is documented to contain EB and Bull trout hybrids.

Eastern brook trout: Uncommon in creek downstream of Storm Lake. Not found in, or upstream of, Storm Lake.

Twin Lake Creek

Cutthroat trout: Common throughout the drainage. Likely hybridized due to past stocking of cutthroat and rainbow trout in Twin Lakes and Lake of the Isle.

Eastern brook trout: Uncommon to common throughout the drainage. Also noted in Lower Twin Lake.

Bull trout: Rare to uncommon throughout drainage. Also noted in both upper and lower Twin Lakes.

Wisdom Ranger District

Plimpton Creek

Westslope Cutthroat Trout: Common within the A-P Wilderness. 30' barrier falls located approximately 1/2 mile below wilderness boundary. Ten WCT were collected in FY96 for genetic testing; no results yet. WCT tested near the Forest boundary in FY94 came back genetically pure. No stocked high mountain lake(s).

Eastern Brook Trout: Extremely abundant below the barrier falls.

Rainbow Trout or Hybrids: No RBT or Hybrids have been documented.

Thompson Creek

Westslope Cutthroat Trout: No WCT have been documented below the A-P Wilderness boundary. No surveys have been conducted above. Stocked high mountain lake(s).

Eastern Brook Trout: Extremely abundant below the A-P Wilderness boundary.

Rainbow Trout or Hybrids: Common below the A-P Wilderness boundary.

Howell Creek

Westslope Cutthroat Trout: No WCT have been documented below the A-P Wilderness boundary. No surveys have been conducted above. Stocked high mountain lake(s).

Eastern Brook Trout: Extremely abundant below the A-P Wilderness boundary.

Rainbow Trout or Hybrids: Rare below the A-P Wilderness boundary.

Mussigbrod Creek

Length 14 miles most of which is outside of the wilderness. Mussigbrod Creek is a water quality limited stream as listed by the Montana Department of Environmental Quality.

Wise River Ranger District

Pintler Creek

Westslope Cutthroat Trout: No WCT have been documented either above or below the A-P Wilderness boundary. No surveys in upper Pintler Creek above Pintler Meadows or Beaver Creek. Stocked high mountain lake(s).

Eastern Brook Trout: Extremely abundant in lower Pintler Creek below Pintler Falls.

Rainbow Trout or Hybrids: Common within Pintler Meadows.

Pintler Creek is a water quality limited stream as listed by the Montana Department of Environmental Quality.

Mudd Creek

Westslope Cutthroat Trout: Cutthroat trout are rare in the West Fork of Mudd Creek both above and below the A-P Wilderness boundary. WCT collected in W. Fork of Mudd Creek and nearby York Gulch are genetically pure. No stocked high mountain lake(s) in the West Fork of Mudd Creek. Water from Palisade Creek (Fishtrap Creek drainage) is diverted into the East Fork of Mudd Creek via of Mudd Lake.

Eastern Brook Trout: Extremely abundant both above and below the A-P Wilderness boundary.

Rainbow Trout or Hybrids: No RBT or Hybrids have been documented.

Fishtrap Creek Drainage

Westslope Cutthroat Trout: WCT have been caught in the West Fork of Fishtrap Creek and Palisade Creek. No fish were collected for genetic testing. Therefore, the genetic

purity is in question. No stocked high mountain lake(s) in Palisade Creek. Stocked high mountain lake(s) in the headwater of the West Fork.

Eastern Brook Trout: Extremely abundant within all drainages both above and below the A-P Wilderness boundary.

Rainbow Trout or Hybrids: RBT have not been document. It's highly possible that WCT below Rainbow Lake are hybridized with RBT.

Fishtrap Creek is a water quality limited stream as listed by the Montana Department of Environmental Quality.

LaMarche Creek Drainage

Westslope Cutthroat Trout: Only cutthroat trout are present in the West Fork of LaMarche Creek above the barrier falls. These fish are hybridized with Yellowstone cutthroat trout (71.1% WCT and 28.9% YCT). No WCT have been documented in the East Fork. Trout Creek and the Middle Fork have not been surveyed. Stocked high mountain lake(s).

Eastern Brook Trout: Extremely abundant within lower West Fork below the barrier falls and the East Fork.

Rainbow Trout or Hybrids: Common in main LaMarche Creek below the Forks.

LaMarche Creek is a water quality limited stream as listed by the Montana Department of Environmental Quality.

Seymour Creek

Westslope Cutthroat Trout: Nine WCT were collected above the A-P Wilderness boundary in 1989. Genetic purity of these fish was 98.8% hybridized with Yellowstone cutthroat trout. No surveys have been conducted since 1989. Current status unknown. Stocked high mountain lake(s). Genetic purity of WCT in nearby Chub Creek (below A-P Wilderness boundary) was 93.8% also hybridized with Yellowstone cutthroat trout.

Eastern Brook Trout: Based on 1989 data, EBT are rare to common above lower Seymour Lake. Current status unknown. Abundant below lower Seymour Lake.

Rainbow Trout or Hybrids: RBT have not been documented in upper Seymour Creek. Mostly likely some RBT are present immediately above the Big Hole River.

Seymour Creek is a water quality limited stream as listed by the Montana Department of Environmental Quality.

Sula Ranger District

The following is a brief summary of what is known about the fisheries resource on the Sula Ranger District portion of the Anaconda-Pintler Wilderness. Unfortunately the wilderness portion of the district has been largely ignored as far as fisheries inventories (lack of access, motorized restrictions, and few habitat changes). The data is from Forest Service and Fish and Game files, some may be out dated, but most of the stream work is from about 1994.

East Fork of The Bitterroot River (Below Star Falls)

Here cutthroat and bull trout are common with a few whitefish and rarely a rainbow (sample section just below wilderness boundary). There seems to be a fluvial population of cutthroat and bull trout (larger fish with seasonal movements). Some larger bull trout may run up the East Fork to Star Falls to spawn. No genetic testing has been done but the cutthroat appear to be good westslope cutthroat even though rainbow are found above and below. More work is needed in this area.

East Fork of the Bitterroot River (Above Star Falls)

No data from this important stretch of fish habitat. It was naturally probably barren of fish, but rainbows were planted in the lakes in the headwaters. Hidden Lake has self sustaining rainbow trout. Some literature indicates it was planted about 1940. It was to planted with WS cutthroat in 1995 in an attempt to swamp the rainbow. The results won't be known for awhile. Ripple was planted with rainbow in 1936 and 1959 and has a self sustaining population. It was also have been planted with WS Cutthroat in 1995. Kelly is shallow with no record of any plants. The whole aquatic system above Star Falls is a high priority for inventory and possible restoration for natives.

Dense Creek

Cutthroat and bull trout are common near its mouth, but probably do not go upstream very far because of barriers.

Swift Creek

Cutthroat and bull trout are common near the wilderness boundary, but do not go upstream very far because of barriers. Lower Swift Creek (outside of wilderness) may be a important bull trout stream for resident and fluvial fish.

Orphan Creek

Cutthroat and bull trout are common on the lower end. Distance of upstream occurrence upstream is unknown.

Carmine Creek

Cutthroat and bull trout are common on the lower end. Distance of upstream occurrence is unknown. Carmine Lake is shallow with no record of any plants.

Buck Creek

Cutthroat and bull trout are common on the lower end, there is a probable barrier a short way upstream. Hope Lake, at the head end of Buck Creek has rainbows. Buck lake is shallow, but was planted with rainbow in 1940. It does not have any fish in it at present.

Hope Creek

No data exists for this stream. Hope Lake was planted with rainbows several time from 1958-1981. It is self sustaining at present. It was scheduled for a WS Cutthroat plant about 1992.

Alpine Creek

Nothing is known about Alpine Creek. Alpine Lakes are shallow and has never been planted.

Park Creek

Nothing is known about Park Creek. Park Lakes are shallow and have never been planted.

Star Creek

Star Creek is below Star Falls; cutthroat and bull trout are common in the lower end. Distance of occurrence upstream is unknown, probably not very far because of barriers.

Clifford Creek

Cutthroat and bull trout are common in the lower end, its a larger tributary and fish may go upstream some distance.

Cub Creek

Small, no data, it could have some fish at least seasonally.

Moss Creek

Small, no data, it could have some fish at least seasonally.

Other Streams

No data exists for any other streams, most are small but there could be some fish use near the mouths of some of them.

Genetics

No genetics have been collected inside the wilderness. Adjacent streams (Meadow, Martin, Moose Creeks) all have pure westslope cutthroat trout. It is reasonable to

assume that MOST of the cutthroat trout in the East Fork are genetically pure westslope cutthroat, their physical appearance agrees with this.

Research Natural Areas

This section summarizes information from the Establishment Records, describing the resources and uses occurring in the proposed RNAs. Establishment Records are part of the project file. Please refer to maps II and III showing the boundaries of each of the proposed areas.

The Goat Flat proposed RNA (1376 acres) was selected to represent a unique alpine ecosystem and associated timberline forests dominated by alpine larch and subalpine fir. There are a number of sensitive plant species and rare plant communities within this RNA. The East Fork Bitterroot proposed RNA (298 acres) features a willow dominated valley bottom with beaver ponds in a subalpine fir forest type.

Beaverhead-Deerlodge National Forest

Goat Flat RNA

The Goat Flat proposed RNA is located in the Anaconda-Pintler Range of southwestern Montana, along the Continental Divide, 14 miles southwest of Anaconda, Montana. Total area of the RNA is 1376 acres. A segment of the RNA, approximately 679 acres lies within the Anaconda-Pintler Wilderness. The remaining 697 acres of non-wilderness land within the RNA consists of reserved federal lands.

The Goat Flat RNA consists of alpine communities and subalpine forest on sedimentary and igneous rock. It contains a wide variety of upper subalpine and alpine plant communities with nearly 190 species represented including Species of Special Concern and five listed as sensitive within Region 1 of the Forest Service.

The site contains populations of eleven plant species listed by the Montana Natural Heritage Program as species of special concern (Heidel 1996). Six of these species are Northern Region sensitive plant species (USDA) Forest Service 1994). In addition, the RNA contains alpine and Larix lyallii - Abies lasiocarpa habitat types. Other vegetative community types/habitat types make up the remainder of the vegetative cover within the RNA, and are useful additions to the natural areas system in the Northern Region, including subalpine larch and whitebark pine forests. Other features include riparian communities, small ponds, avalanche chutes, patterned ground on alpine tundra, and bunchgrass parks. Elevations range from 8200' - 9989'.

Goat Flat RNA contains scattered subalpine forest, and subalpine larch forest. None of the timber is of commercial quality. Timber harvest in the RNA is not permitted.

The RNA is located in a setting of intensely alpine-glaciated landforms. Cirque basins and glacial trough valleys form Page Creek, Dry Creek and Storm Lake Creek valleys, all of which have headwaters in the RNA. Runoff from Storm Lake Creek feeds the species-rich, moist meadows at the south end of Storm Lake.

The grizzly bear, federally listed as threatened, is considered a migrant and possibly a resident in certain locations of the Beaverhead-Deerlodge National Forest; the grey wolf, federally listed as endangered, is considered a rare migrant to the Forest.

Lands north of the RNA around and including Storm Lake, are currently receiving moderate camping, hiking, horseback riding, and hunting use. Trails that lead into the RNA are receiving light foot and horse travel. These activities are predicted to increase in future years. Fishing from the shore and from small boats (motorized and non-motorized) occurs in Storm Lake (outside of the RNA). A segment of the Continental Divide National Scenic Trail lies within the RNA.

Native Americans probably used the area in and around Goat Flat RNA for transient camps during the summer months. Similar sites in the Wilderness show evidence of such use. All of the mountain passes were used by Native Americans as travel routes; Storm Lake Pass, within the RNA, was probably used as well.

Grazing by domestic livestock has not occurred within the RNA and will not be allowed following establishment. Light grazing by pack stock has occurred and will likely continue near pack trails.

There are no current mineral leases, and no post-FLPMA (1976) unpatented mining claims on Goat Flat RNA (Avery 1996). The RNA is in an area of low mineral potential, as identified by the U.S. Geological Survey and U.S. Bureau of Mines (Close et al. 1982, Elliott et al. 1985).

Bitterroot National Forest

East Fork Bitterroot RNA

The East Fork Bitterroot proposed RNA is located in the southeastern portion of the Bitterroot National Forest, Sula Ranger District and is entirely within the Anaconda-Pintler Wilderness Area. The central features are beaver dams and ponds and riparian communities dominated by various willows (Salix spp.1/), and sedges (Carex spp.). The RNA includes a wilderness segment of the East Fork of the Bitterroot River. The size of

the RNA is 298 acres; approximately 125 acres or 43% of RNA support beaver ponds an willow-sedge communities.

The RNA also supports conifer forests dominated by lodgepole pine. Engelmann spruce, and subalpine fir, representative of the subalpine fir/dwarf huckleberry habitat type. To date, this RNA provides the only example of this habitat type in the RNA network in western Montana. The RNA will serve as a reference are for ecologic monitoring, especially the short- and long-term vegetation dynamics associated with a beaver influenced river system.

The East Fork Bitterroot River flows through the entire RNA, and several other streams enter the river within the RNA. The valley bottom along this reach of the river contains a series of active and abandoned beaver dams, which have allowed extensive areas of shrub and herbaceoous riparian communities to develop. Establishment of the RNA will maintain watershed values.

The elevation at streamside portions of the RNA averages 5400 feet. The highest elevation is 5600 feet along the north and south boundaries. The 5600 foot boundary contour incorporates portions of the riparian areas associated with six tributary streams into the RNA.

About 168 acres of the RNA are forested. However, timber harvest is not permitted within the Anaconda-Pintler Wilderness or within RNAs.

No endangered, threatened, or sensitive plant or animals species, apart from occasional visits by bald eagles (Haliaeetus leucocephalus), are known to occur with the RNA.

Fishing is popular along the East Fork Bitterroot River and Trail 433 within the RNA is used by fishermen and other recreationists to access the Anaconda-Pintler Wilderness Area. Access to the river within the RNA, however, is limited by dense willow thickets and beaver ponds, and few side trails are present off Trail 433. Fall hunting for elk and deer within the wilderness is also popular, but within the RNA, use is largely confined to Trail 433.

There are no known historic cultural features within the RNA. Nearby areas were roaded, logged and subject to homesteading early in the century. The wilderness portion of the East Fork drainage was undeveloped.

Grazing by domestic livestock has not occurred within the RNA, and will not be allowed following establishment. Light grazing by recreational pack stock has occurred and will likely continue near existing pack trails.

East Fork Bitterroot RNA has no commercial mineral resources. Its location within the Anaconda-Pintler Wilderness is withdrawn from mineral entry.

Mystic Lake Cabin

Mystic Cabin is the only administrative cabin site within the present A-P boundary. It is located on the Beaverhead-Deerlodge National Forest in the NE1/4 of Section 2 T1N R16W, adjacent to Mystic Lake on Trail #369. Elevation is 7,800 feet. The structure is shown on the A-P Wilderness Map with a "Forest Service Station" symbol and the words "Mystic Lake."

The site is in a superior setting which lies well within the Wilderness. It is several hours from the trailhead by the shortest access route. The setting is in a natural condition with minimal disturbance. The building has its structural integrity and is characteristic of an intermediate station. There are few similar sites on the Forest or on adjacent Forests. The property was evaluated by the Historic Research Associates in the 1991 region-wide study. It was considered for significance in relation to other properties nationally and statewide.

Informal surveys of people in the area indicate that they enjoy seeing the old guard station. It has historic interest and adds to their wilderness experience.

The cabin has been in place for 60 years and has not been impacted by fire. Wet ground conditions, the lake, streams, trails and bare ground make the site somewhat immune to ground fire.

	TABLE V - SUMMARY OF CURRENT OUTFITTER AND GUIDES IN A-P							
OUTFITTER	DISTRICT	ТҮРЕ	PRIORITY DAYS	HIGH ACTUAL USE ¹	AVERAGE ACTUAL USE ²	POTENTIAL ASSIGNED CAMPS IN A-P	COMMENTS	
Under Wild Skies	Philipsburg & Wisdom, Philipsburg primarily	Stock, Day & Overnight Summer & Hunting	281	104 S, P-Burg, ('96) 34, S, Wisdom ('94) 126 H, P-Burg, ('96) 135, H, Wisdom, ('88)	70, S, P-Burg, 10, S, Wisdom 87, H, P-burg 50, H, Wisdom	Cutaway, Bear Big Johnson, Edith Little Johnson, Tamarack, Upper Phyllis, One Hundred Acre Meadow	Has changed hands several times. Use increasing on both districts. EA exists on Wisdom which caps use.	
LaMarche Ck Outfitting	Wise River	Stock, Day & Overnight Hunting	none	77, S, ('89) 376, H, ('92)	20, S 143, H	East Fork LaMarche, Trout Creek, McGlaughlin, Mudd Lake	New Owner. Using more day use than overnight	
Wilderness Ventures	All Districts Wise River primarily	Backpacking, Summer, Overnight	560	560, S, ('93-97) (Summer, Backpacking, overnight)	541, S	None assigned, some approved areas used on a repeated basis	Progressive Camps	
East Fork Outfitters	Sula	Stock, primarily overnight hunting; some summer	163	76, S ('94) 220, H ('97)	34, S 98, H	Clifford Ck., Kelly Lk., Kurtz Flat, Hidden Lk., Buck Ridge Meadows, Alpine Meadows	Has changed hands a number of times	
Sundance	Wise River	Stock, day use only.	None	35, S, dayuse, ('97)	35, S	None	Day rides from Lodge in LaMarche Cr.	
Big M Outfitters	Philipsburg	Stock, day & overnight, summer	20	22 S, (*97)	12, S	None	Utilizes Spike Camps	

Wilderness - Wide Totals for High Actual Use: 908 Summer, 857 Hunting Wilderness - Wide Totals for Average Use: 722 Summer, 378 Hunting

Service Day, a day or any part of a day on National Forest System lands for which an outfitter or guide provides goods or services, including transportation, to a client. ON=Overnight D=Day Use S=Summer H=Hunting

¹High Actual Use is the highest use that has occurred in the last 10 years or during the number of years for which we have data, regardless of owner.

²Average Actual Use is the average of service days used over the last ten years or for the number of years for which we have data.

LAKE NAME	DRAINAGE	SPECIES ²	CE, ANACONDA-PINT NATURAL REPRODUCTION	AMT, USE	COMMENTS
Alpine Lakes	Alpine Ck., Brt	Fishless	NΛ	Low	
"Annie", (T3 N R16 W Sec 35)	M Fk. Rk Ck	Fishless		Med	Natural springs
Bear	Beaver Ck., BH	Fishless	?	Low	Shallow
Buck	Buck Ck., Brt	Fishless	NA	Low	Shallow
Carmine	Carmine Ck., Brt	Fishless	NA	Low	
Carpp	Carpp Ck., RkCk	WCT	-7-	High	High day use, poor nutrition, possible winterkill
Lower Carpp	Carpp Ck., RkCk			High	
Upper Carpp	Carpp Ck, RkCk	Fishless		Med	Shallow
Continental	Thompson Ck., BH	WCT	7	Low	Shallow, formerly stocked w/ RB, 1946
Crystal	Thompson Ck., BH	RB	yes	Med.	
Edith	Falls Fk., RkCk	RB, GR, WCT	yes	High	"Natural reproduction provides more recruitment than desirable for maximum growth"
Emerald	EFk.LaMarche, BH	Fishless	NA .	Low	
Flower	Page Ck., RkCk.	Fishless	NA	Med.	Shallow
Hicks	WFk.LaMarche, BH	RB	yes?	Med	
Hidden	Brt	RB	yes	High	
Hope	Hope Ck., Brt	RB	yes	Med	Increasing Use
Ivanhoe	M.Fk. RkCk	RB	yes	Med	
Johnson	Falls Fk., RkCk	WCT, LNS	yes	High	Most heavily used area in A-P:
Kelly	EPk Brt	Fishless		High	Shallow
LaMarche	LaMarche, BH			Low	
Lion	Thompson Ck., BH	RB	yes	Med	
"Little Annie" T3N R15W Sec 16	Tamarack Ck, RkCk			Med	
Little Johnson	M Fk RkCk			Med	
Lost Lakes	EFk Fish Trap, BH	Fishless		Low	
Martin	Falls Fk, RkCk	Fishless		Low	Shallow

¹The Bitterroot and Rock Creek drainages are west of the Continental Divide. Both drainages have native Westslope Cutthroat and Bulltrout populations. The Big Hole drainage is east of the Continental Divide and has an East slope strain of Westslope Cutthroat.

² WCT=Westslope Cutthroat; RB=Rainbow, GR=Grayling; LNS=Long-nosed sucker

	TABLE VI - FI	SH OCCURRENC	CE, ANACONDA-PINT	FLER LAKES	
LAKE NAME	DRAINAGE ³	SPECIES ⁴	NATURAL REPRODUCTION	AMT. USE	COMMENTS
Mosquito	Thompson Ck, BH				
Mystic	Howell Ck., BH	RBxCT	yes	Med	
Oreannos	PintlerCk., BH	WCT, RB	no	High	Fish freeze out; repeatedly stocked in past
unna Mariana	4-8	+		Med	Historically planted w/ RB and CT
				Low	
		Fishless		Low	Shallow
Phyllis		RB, CT	?	Med	
· · · · · · · · · · · · · · · · · · ·	RkCk	CT	?	High	
				Med	
				High	
***	EFk Btr			High	
	Sauer Ck., RkCk	?		Low	Historically planted w/ CT
0	Pintler Ck., BH	Fishless		Med	Shallow
Spruce	Spruce Ck, RkCk				
Surprise	Hell Roaring, BH	Fishless		Med	Shallow
Tamarack	Carpp Cr, RkCk	Planted WCT	No	High	Increased use since stocked in 1993
Unnamed, West, Warren Lake	ВН	Fishless		Low	
Unnamed, below Queener Mnt.	Seymour Ck, BH	Fishless		Low	
Unnamed lake T3N, R15W, Sec 21, NW1/4	Carpp Ck., RkCk.	RB	Yes	Low	
Upper Seymour	Seymour Ck, BH				
Violet	Hell Roaring, BH			High	
Warren	LaMarche, BH	Fishless		- 	
11 011 011	Laiviaiche, Dil	1.19111692		Med.	Stocked in past

³The Bitterroot and Rock Creek drainages are west of the Continental Divide. Both drainages have native Westslope Cutthroat and Bulltrout populations. The Big Hole drainage is east of the Continental Divide and has an East slope strain of Westslope Cutthroat.

⁴ WCT=Westslope Cutthroat; RB=Rainbow, GR=Grayling; LNS=Long-nosed sucker

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

Introduction

This chapter discloses environmental consequences of implementing the alternatives described in Chapter II, pages 23-28 or the consequences of taking No Action at this time. The discussion on affected environment, outlined in chapter III, provides the baseline for describing the consequences. A comparison of Alternatives is presented in Chapter II, pages 47-53. Action alternatives differ from one another in the degree and means of managing human use to avoid biological, physical and social impacts. Each alternative is analyzed in regard to each issue. The effects of each alternative, as a whole, are summarized in the narrative. Because the overall effect of each alternative is a composite of the consequences of various actions the effects of individual actions are also summarized in Table VII, Chapter IV, page 111.

Chapter IV focuses on the most significant effects. Environmental consequences of the proposed action are discussed by issue. This chapter also discusses the cumulative or combined effects of the actions of the alternatives. Decisions that draw upon the effects analysis are limited only to the Anaconda-Pintler Wilderness.

The major issues, (see Chapter II, pages 18-22), define the scope of environmental concern for this project.

ISSUE 1: Human activity is affecting vegetation, soils and the natural appearance of the A-P in areas of concentrated use.

In many areas of the A-P, human activity is having an increased impact on vegetation, soils and the natural appearance of the Wilderness. Vegetation around campsites is slowly being obliterated and/or the plant composition in the immediate area is changing. Soils are becoming compacted and can no longer support plant life or surviving plants become stunted and deformed. Lack of vegetative ground cover increases erosion and sediment deposition in lakes and streams. Water run-off and puddling along with potential wind erosion is increasing as soils become compacted. Vegetative changes and lack of soil cover make the areas where they occur seem less wild and diminish the nature appearance of the Wilderness.

Campsites

Campsites account for many of the impacts on soil, vegetation, and natural appearance. The number, size and placement of campsites may influence wildlife habitat, water quality, solitude and many other factors important to wilderness integrity. Any area with repeated heavy use will experience vegetation loss and soil compaction. Impacts occur with camping use, foot or stock travel, and are often most extreme where stock is repeatedly contained for long periods. This is true with highlines, portable corrals, and even a leg picket system if it is not moved or is installed in the same spot repeatedly, particularly in a poorly selected site or in wet soil conditions. In some cases facilities may concentrate use and slow the proliferation of campsites and related impacts. However, if use in a given area increases to the point that campsites with facilities are already in use or if users chose other campsites, then proliferation of impacts occurs anyway.

Effects Common To All Action Alternatives (B-E)

Establish Management Zones

Establishing management zones and their respective prescriptions will be the primary tool for addressing the impacts of human use on soils, vegetation and natural appearance. The best way to minimize impacts, as determined by research, is to concentrate recreation use in those areas that are already impacted and to disperse recreation use in areas that are very slightly or not yet impacted. (Cole. 1989, 1993)

Zones are established in all action alternatives. The amount of each zone changes by alternative. A description of zones, standards, guidelines and the issues relating to human use are discussed in Chapter II, pages 36-42.

Zones are along trails and adjacent to destination areas. They are the approximate area of influence and can not be precisely calculated because of geographic irregularities. For example, the area of influence around a lake will differ if cliffs come down to the lake on one side than if a flat area exists all around it. Lake shapes, curves in the trail, adjacent terrain are all factors which make an acreage measurement of the zones unmeaningful. Approximate area of a given zone is best gauged by looking at the map and by referencing Table IV in Chapter II, page 63.

Those conditions described for each zone relate directly to indicators which measure the impacts of human activity on vegetation, soil, and the natural appearance of the A-P. These indicators include: campsite density, barren core area, social trails, encounters, administrative camps, permanent structures and trails. Each zone has standards which relate to impacts. The amount of acceptable impact varies by zone. Impacts are minimized by a combination of actions which vary by alternative. For example, the number of campfire closures, the group limit and other actions which vary by alternative, help maintain the standards set in each zone. Actions will decrease campsite density, barren core area and the number of social trails. These specific indicators can be measured, on the ground to see if desired conditions are being met by the actions being taken.

Direct and Indirect Effects

Management zones will set limits, in different portions of the Wilderness, based on measurements of conditions. The intent of establishing zones is to maintain or re-establish acceptable resource and social conditions. If conditions are approaching unacceptable then strategies for avoiding degradation are in place. These specific actions are discussed in the following sections specific to each alternative. Zones allow managers to apply a range of desired conditions which are specific and acceptable within wilderness. Some areas will have more human activity and show more bio-physical and social impacts than do areas with fewer people and their associated activities.

Cumulative Effects

It is important to note that in all action alternatives, the A-P is primarily Zone I. Because of this, regardless of alternative, the A-P, over the long term, maintains a high degree of apparent naturalness. Ecological processes operate with essentially no perceptible or measurable evidence of human impact or use. The area functions as a wild place, looks and feels wild to those who visit.

Alternative A - No Action

In Alternative A no new administrative actions are taken to alter human impacts and those impacts which occur from stock use. Those actions which are currently undertaken to minimize the impacts of recreation use will continue to the degree that funding and staffing allow. These include such things as education efforts in "Leave No Trace Techniques", naturalization of undesirable campsites or fire rings, enforcement of current regulations such as group limit, weed seed free feed requirements, lake set-backs for grazing and tethering of stock, and a camping closure area on one side of Johnson Lake.

Direct and Indirect Effects

Although there is no change in current direction, existing condition is not maintained in the long term because pressures on the Wilderness are increasing. "Desired Future Condition" and those objectives which relate to vegetation, soil and social conditions are not attained because degradation from increased recreation use continues. Direct and indirect effects include a proliferation of campsites, increase in campsite density, and barren core areas enlarging at high use campsites due to compaction of soils and loss of vegetative cover. More social trails develop between campsites, firewood gathering areas and attractions. An overall gradual degradation of vegetation, soils and wilderness appearance occurs.

Cumulative Effects

Under Alternative A, management is not tied to zones. Specific, measurable, attainable management objectives for resource conditions are not clearly defined and managers have no consistent way to determine when actions should be taken to improve conditions. The cumulative effects are increased degradation of vegetation and soils, and depletion of dead wood at a number of lakes. The "human browse line" on trees continues to develop. Compacted soils and reduced vegetation at campsites affect the appearance of campsites making them look degraded and less natural. An increasing number of social trails also reduces the natural appearance of the area.

Alternative B - Recreation/Human Use Emphasis

Alternative B is the most recreation oriented of the action alternatives. It is similar to Alternative A except that zones with goals, objectives, standards and guidelines are established. This makes it possible for trends to be assessed in relationship to various indicators.

Direct and Indirect Effects

The amount of each zone varies by action alternative. This alternative has the most Zone IV (Transition) and the least Zone I (Most Natural). It has more Zone III and less Zone II than other action alternatives. Of the action alternatives, Alternative B will have the greatest campsite density, the highest number of social trails, the most barren core area, more administrative and permitted camps, permanent structures, signs, and non-system trails than any of the action alternatives. In Alternative B campsites are likely to increase in number and have larger barren core areas than those in other action alternatives. More soil compaction, loss of vegetative cover, and social trails occur than in other action alternatives. Heavier stock traffic on system trails, than in other action alternatives, exposes more mineral soil. Bare soils in campsites are more susceptible to erosion so more sediment reaches adjacent streams and lakes. The greater number of campsites and more heavily impacted sites causes the wilderness to appear less natural. Resource protection facilities such as hitchrails and toilets prevent some widespread impacts but are themselves structures and thus detract from the naturalness of wilderness. Because group size does not decrease and other restrictions are not invoked, e. g. campfire restrictions, overall, impacts will be similar to Alternative A. Maximum freedom for the recreationist is maintained. Those measures taken to concentrate use will concentrate impacts. Managers will be able to gauge impacts and trends based on the indicators for each zone. It will be possible to track use patterns because of the self issuing permit.

Cumulative Effects

The Zone distribution in Alternative B allows more impact on soils and vegetation than other action alternatives. This includes: larger barren core areas at the more heavily used campsites, a proliferation of campsites, higher campsite density and more social trails. Impacts are similar to Alternative A. Under this alternative zone conditions are maintained by an increase in education outreach, more wilderness ranger coverage, increased mitigation of impacts, and increased hardening of sites with some facilities for resource protection.

Alternative C - Emphasis On Retention Of Existing Resource And Social Conditions (Preferred Alternative)

This alternative attempts to strike a balance which maintains the status quo in terms of how the A-P looks and feels. It improves resource and social conditions where possible without being highly restrictive. Allocation of zones mimics the existing condition.

Direct and Indirect Effects

Zone distribution for this alternative falls in between the distributions for Alternative B and those for Alternatives D and E. The overall effect is that less human impact is evident in this Alternative than in Alternatives A or B but more impact is evident than in Alternative D or E. Human and stock impacts are reduced by limiting the group size to a maximum of 16 beating hearts. The current group

limit of 15 people and 20 head of stock is reduced to any combination of people and stock, totalling 16. This impacts stock users who have historically travelled in larger groups. It decrease the impacts of travelling or camping with a large number of stock. Hitchrails also help reduce the impacts of stock at the lakes and/or on trails leading to the lakes. Hitchrails are placed at Johnson Lake, the junction of Hope Lake Trail #424 and the Continental Divide Trail above Ripple Lake. Camping with stock is not allowed within 1/4 mile of Oreamnos, Sawed Cabin or Ripple Lakes. This minimizes stock damage adjacent to these lakes.

Impacts on vegetation and soils are reduced by campfire restrictions. Campfire closures create a number of beneficial changes. Soil compaction and sterilization which occur around campfires are eliminated. Vegetation is no longer trampled or disturbed by wood gathering and congregating around a fire. Wood accumulates on the ground and creates microclimates for vegetation. Organic material from rotting wood becomes part of the soil building processes. Rocks are no longer blackened or cracked by campfires. Repeated use in some sites is reduced because the absence of fire rings or fire areas makes the sites less obvious.

Cumulative Effects

The cumulative effects of Alternative C include fewer campsites with large barren core areas, fewer social trails, and minimal proliferation of campsites. Impacts from stock are reduced and become less evident overall. Under Alternative C less vegetation and soil disturbance occur than in Alternatives A and B. The wilderness maintains a more natural appearance. Under this alternative zone conditions are maintained by an increase in education outreach, more wilderness ranger coverage, increased mitigation of impacts, and increased regulation and enforcement.

ALTERNATIVE D--Emphasis on Unmodified Natural Environment & Natural Processes

This alternative has the highest number of regulations, signs, etc. within the wilderness. It changes the wilderness experience and feeling of "freedom" more than the other action alternatives. The regulations change use patterns and decrease impact causing activities. This Alternative has the hightest number of new restrictions and regulations. It maintains the most Zone I and the least Zone IV.

Direct and Indirect Effects

Group limit decreases to any combination of 12 beating hearts. This decreases those impacts associated with large groups, including larger campsites, more social trails and associated damage to vegetation and soils. Impacts to soil and vegetation are also reduced by additional campfire and camping restrictions. These closures create a number of beneficial changes. Soil compaction and sterilization which occur around campfires are eliminated. Vegetation is no longer trampled or disturbed by wood gathering and congregating around a fire. Wood accumulates on the ground and creates microclimates for vegetation. Organic material from rotting wood becomes part of the soil building processes. Rocks are no longer blackened or cracked by campfires. Campsites do not occur in fragile lakeside areas. Because stock users are required to pack feed less grazing and its resulting

impacts take place. Resource protection structures are seldom utilized to concentrate use and prevent dispersal of impacts. Impacts are dispersed or controlled by regulations.

Cumulative Effects

Campsite proliferation slows and barren core areas do not increase at most established campsites and decrease in some places. Fewer stock impacts occur. Grazing is minimal, soil compaction and puddling are reduced, tree damage from firewood gathering and tying of stock slows. Impacts to vegetation and soil decrease. Under this alternative zone conditions are maintained by an increase in education outreach, more wilderness ranger coverage, increased mitigation of impacts, and increased regulation and enforcement.

Alternative E - Permit (Quota) System

Alternative E calls for an Agency issued permit during the primary use season from June through September.

Direct and Indirect Effects

This alternative requires obtaining a permit from a Forest Service office. It incorporates a quota. Permits can limit the number of visitors when and where necessary to prevent social and bio-physical impacts. Numbers may be limited based on destination, allowing a set number of individuals and stock in a given lake basin or area. This type of permit is an "up front" restriction which can minimize biophysical impacts by limiting the numbers of people in any area. Displacement of visitors could create impacts in other areas outside the wilderness. The natural condition of the wilderness is maximized in this alternative by control of use patterns. It has clear advantages for resource protection because it can limit numbers at specific destinations. Because campfires prohibitions next to lakes are the same as Alternative C effects which decrease impacts on soil and vegetation are the same.

Cumulative Effects

Proliferation of campsites, large campsites with barren core areas, and the number of social trails diminish to the lowest level of any alternative. The condition of soils and vegetation improves. Numbers of visitors and stock can be limited and the amount of use in given areas can be controlled. Under this alternative zone conditions are maintained by an increase in education outreach, more wilderness ranger coverage, increased mitigation of impacts, and by limiting numbers and use in certain areas by a permit and quota system.

ISSUE 2: Elements of the wilderness experience--solitude, adventure, discovery, freedom and challenge are adversely influenced by increasing recreation use

Increased use diminishes the opportunity for solitude. As people are displaced from some areas and move into others the cycle of increased social and biophysical impacts in more remote areas continues.

Places where solitude used to be virtually guaranteed become more and more utilized by individuals who are displaced from other areas with increasing use. Although it is difficult to measure the wilderness experience, indicators such as campsite density, encounters, administrative and permitted camps, trails, signs, and permanent structures measure elements which influence that experience. All these indicators measure factors which diminish a feeling of solitude, adventure, discovery, freedom and challenge.

Effects Common To All Action Alternatives (B-E)

Establish Management Zones

Establishing management zones and their respective prescriptions is the primary tool for measuring the social impacts of human use. A description of zones and the issues relating to human use are discussed in Chapter II, pages 36-42. Zones set standards and objectives for encounters, campsite density, administrative use, etc. which influence the wilderness experience. They provide a mechanism for measuring these indicators in given areas and then determining if the condition of the area is changing.

Direct and Indirect Effects

Management zones set limits, in different portions of the Wilderness, based on measurements of conditions. The intent of establishing zones is to maintain or re-establish acceptable resource and social conditions. If conditions are approaching unacceptable then strategies for avoiding degradation are in place. Zones allow managers to apply a range of desired conditions which are specific and acceptable within wilderness. Some areas will have more human activity and show more social impacts than do areas with fewer people and their associated activities. Zone standards set limits on encounters, campsite density, administrative use, trails, signing, and permanent structures. By maintaining these limits areas seem and appear more wild. The opportunity for solitude is increased. Elements of adventure and discovery increase. The presence, evidence and influence of humans is less evident.

Cumulative Effects

It is important to note that in all action alternatives, the A-P will be primarily Zone I. Because of this, regardless of alternative, the A-P over the long term will have a high degree of apparent naturalness, ecological processes will operate with essentially no perceptible or measurable evidence of human impact or use, there will be outstanding opportunities for solitude, and recreation will be characterized as primitive, unconfined, and challenging. The area will function as a wild place and will look and feel wild to those who visit. Solitude, adventure, discovery, freedom and challenge will be enhanced by maintaining standards set for the respective zones.

Alternative A - No Action

No new administrative actions are taken to alter human activity. Those regulations and actions currently in place continue.

Direct and Indirect Effects

Campsite densities, encounters, social trails, administrative and permitted camps will continue to increase since no added regulations or other measures compensate for increased use. FS system trails, signs and current structures will remain unchanged. Those impacts resulting from campfires and large groups who use stock will continue to increase. Current freedoms which relate to group size, campfire use, and camping with stock continue. There is no method for obtaining accurate use data so it continues to be incomplete and inaccurate.

Cumulative Effects

There will be a reduced feeling of solitude, adventure, and freedom due to the large group size, increased campsite density, more social trails, permitted and administrative camps. Larger groups will impact trails and camping areas making the wilderness feel less natural. More visitors will be encountered on established trails and in off trail areas affecting the feeling of adventure, challenge and discovery when traveling off trail. Fewer hidden areas may be found without the signs of human use.

Alternative B - Recreation/Human Use Emphasis

Alternative B is the most recreation oriented of the action alternatives. In many ways it is similar to Alternative A except that zones with goals, objectives, standards and guidelines are established. This makes it possible for trends to be assessed in relationship to various indicators.

Direct and Indirect Effects

This alternative has more Zone IV (transition/portal) and the least amount of Zone I (natural) than the other alternatives. The amount of Zone II is less than in the other action alternatives and it has more Zone III. With this mix of zones the expectation of solitude, adventure, discovery, freedom and challenge is less than with other action alternatives. A self issuing permit is available at the trailhead registration box and will be required of all users entering the Wilderness. This requirement may feel like an intrusion to some people but it will not decrease spontaneity, freedom, or a sense of adventure. The self- issued permit provides managers with a mechanism to determine use trends. Administration costs increase slightly because of the cost of permits, stocking permit boxes and checking for compliance.

Group size stays the same as in Alternative A so large groups with stock are still encountered on the trail and in campsites. This means that the impacts on vegetation and soils as well as the social impacts of large groups continue. Some areas have hitchrails and/or toilets to minimize impacts. Use is purposely concentrated around these structures, however, the decrease the feeling of wildness in the immediate area since they are a reminder of human presence. Impacts to soil and vegetation in the immediate area of hitching racks or toilets is increased so the area appears less wild. In Alternative B campsites are likely to increase and have larger barren core areas with more exposed soil, damaged vegetation and more social trails. More encounters occur on the trail, in camp and in off trail areas so the feeling of adventure and discovery is diminished. Added signs such as "tie stock here" decrease a

sense of wildness. The presence of administrative or permitted camps decrease solitude and feelings of adventure, discovery, freedom and challenge.

Cumulative effects

olitude, adventure, discovery, freedom and challenge are all adversely affected by the presence of large groups, administrative use, permitted camps, and more signing. Impacts such as proliferation of campsites and social trails decrease the feeling of discovery. Areas seem more used and less wild.

Alternative C - Emphasis On Retention Of Existing Resource And Social Conditions (Preferred Alternative)

This alternative attempts to strike a balance which maintains the status quo in terms of how the A-P looks and feels. It improves resource and social conditions where possible without being highly restrictive.

Direct and Indirect Effects

Zone allocations mimic the existing condition. This alternative has more area in Zone I than does Alternative B but less than Alternatives D and E. This Alternative also has more Zone IV than does Alternative D or E. The overall effect is that human impact will be less evident in this Alternative than in Alternatives A or B but more impact will be evident than in Alternative D or E. The self issuing permit requirement may feel like an intrusion to some people but it will not decrease spontaneity, freedom, or a sense of adventure. The self- issued permit provides managers with a mechanism to determine use trends. Permitted group size decreases to any combination of 16. This limits the size of stock groups and thus helps reduce the impact of stock use. Alternative C includes actions as described in Chapter II to change use patterns and decrease impact causing activities. Actions respond to emerging problems and are preventative with emphasis on minimizing both bio-physical and social impacts. The constraints focus on those measures which will best curtail impacts and will be least objectionable to the majority of people who use the wilderness. This alternative is less restrictive than Alternatives D and E. It does less hardening than Alternative B.

Hitchracks at Johnson, the junction of Hope Lake Trail and the Continental Divide Trail, and above Ripple Lake encourage stock users to tie their stock and approach the lakes on foot. Hitchracks also provide an alternative to tying to trees and concentrate use so that stock tie areas do not occur in numerous places. Toilets placed at Johnson Lake reduce sanitation problems and the appearance of toilet paper under or behind many rocks and trees in heavy use areas along the lakeshore. The impacts of campfires on soils and vegetation are reduced by encouraging campers to use stoves and other "Leave No Trace Techniques" which relate to campfires, Improvements in condition are especially notable in the campfire closure areas within 1/4 mile of: Oreamnos, Sawed Cabin, Upper Phyllis, Upper Carpp, Flower, and Surprise Lakes. Because these areas have fewer impacts they look and feel more wild. The restrictions, however, are a constraint on behavior and this seems less wild to some people, plus, the traditional enjoyment of a campfire in the immediate vicinity of these lakes is

lost. Thus the wilderness experience is enhanced in some ways but is diminished in other regards, depending on one's point of view.

Cumulative Effect

urrent wilderness quality both socially and biophysically will be maintained over the long term. The feeling of wildness is higher than with Alternatives A & B. In Alternative C there are potentially fewer campsites with larger barren core areas, fewer social trails, and fewer encounters on and off trail. The current opportunities for experiencing solitude, adventure, discovery, freedom and challenge are maintained and in some cases improved over time.

Alternative D--Emphasis On Unmodified Natural Environment & Natural Processes

This alternative is the most restrictive within the A-P.

Direct and Indirect Effects

Further restrictions in the form of campfire and camping closures decrease feelings of freedom but because of improved conditions in soil and vegetation the area feels more wild. Campsite density and encounters decrease as do the number of administrative and permitted camps. These changes increase the feeling of solitude and also decrease impacts. The number of hitching racks and toilets decrease making the area seem more natural. The decrease in group size to twelve beating hearts eliminates large stock groups and decreases the size of hiking groups. Stock users are required to pack in feed and grazing is discouraged. Stock users are encouraged to bring containment for their stock such as hitchlines, electric fence or picketlines. This alternative restricts the freedom of stock users in numerous ways.

Cumulative Effects

Campsite proliferation slows down. Areas look and feel more natural since for the most part barren core areas do not increase and decrease in some areas, as do the number of social trails. Encounters, particularly with large groups, decrease. The feeling of solitude, adventure, challenge, and discovery increases in most of the wilderness.

Alternative E - Permit (Quota) System

Alternative E is the most restrictive alternative with the requirement that all parties entering the wilderness must obtain a mandatory permit issued at a Forest Service Office.

Direct and Indirect Effects

Requiring all visitors to obtain a permit prior to entering the wilderness will result in a loss of spontaneity on the part of users. They will need to plan their trip in advance and may not be able to take spur of the moment trips. Permits will be used to control numbers and amount of use in areas,

to reduce impacts on campsites, lakes, and trails. The agency issued permit provides the most administrative control of use patterns and displacement. Many visitors will feel constrained by the permit requirement and some might be temporarily denied entry to an area.

Administering this type of permit system will require a reservation system, extensive front office involvement, communication between districts on a regular basis, law enforcement, field administration and substantial time and expense for each of these elements.

Cumulative Effects

The long term effect of restrictions and controlling the number and possible destinations of the users are: the potential reduction in the proliferation of campsites, large campsites with barren core areas should be reduced, social trails between campsites for firewood gathering area and around lakes should be reduced or become not as evident as a result of the lower use levels, encounters on trails and in camp will decrease with a general increase in the opportunity for solitude. Within the Wilderness, there should be a greater feeling of wildness. The natural condition of the wilderness and the feeling of solitude, adventure, discovery and challenge are maximized with this alternative.

ISSUE 3: Management actions or ways of managing human use, influence elements of the wilderness experience in the A-P.

Administrative actions can change the wilderness experience. They influence the feeling of solitude, challenge, freedom of choice, spontaneity or control. More official presence, more facilities and/or regulations all change the visitors experience of what is wild. With increased use, management actions are necessary to protect aspects of wilderness. The alternatives have different types and different amounts of administrative actions to minimize bio-physical and social impacts.

Effects Common To Alternatives B, C, And D

Alternatives B, C and D Require a Self-Issuing Permit

Entry permits will be required for both day and overnight use. Permits will be free and available at trailheads under Alternatives B, C and D. They will not regulate use.

Direct and Indirect Effects

Entry permit will be mandatory for anyone entering the Wilderness. Spontaneity and convenience of the visitor will be maintained since permits will be available at trailheads and numbers will not be limited.

The self-issuing permit is an inexpensive and accurate way to assess wilderness use. Currently there is no economical way to obtain accurate information on numbers of users, length of stay, destinations, or type of visitors, i.e. (day, overnight, hikers, stock users, local, out of state, etc.) Many facets of management could be improved with better information. Research and experience other places have shown that self-issuing permits are a good information gathering tool. This method is less expensive

and provides more useful data than trail counters, trailhead counts or sporadic back country encounter data.

Cumulative Effects

Self-issuing permits provide an education opportunity since *Leave No Trace* information can be included on the form. Rules and regulations are listed on the tear off portion of a self-issuing permit. This helps gain compliance because it provides a ready reference and rationale. People know their names are available to agency personnel at the trailhead and law enforcement officials no longer need to be hesitant to enforce regulations because people "didn't know". Long term effects of a permit system should be an improvement in how visitors treat the wilderness by reducing their impacts and having the feeling they are entering a special place.

Alternative A - No Action

The No Action Alternative means "no change" from current Forest Plan direction as it exists in the 1977 A-P Plan. "Existing Condition" is not maintained because pressures on the Wilderness are increasing. "Desired Future Condition" would not be attained since degradation from increased recreation use continues.

Direct and Indirect Effects

The effect of no action is a proliferation of campsites, more and larger barren core areas, higher campsite densities, increased encounters with diminished opportunity for solitude, and more social trails. The public would not experience a change in wilderness regulation, wilderness patrols, trail maintenance or other administrative actions as a result of this alternative. Groups of the same size, a maximum of 15 people and 20 head of stock could continue wilderness use. Guidelines for outfitters would remain unchanged. Campfire restrictions would not curtail campfire use. Campsites would still be naturalized by some members of the public and wilderness rangers. It is difficult to predict if this would be sufficient to slow the proliferation of campsites given increasing use and the lack of other constraints on human activity. The camping closure at Johnson Lake, between the trail and the lake on the west side remains in effect. Peoples activities would not be channeled by resource protection facilities.

Cumulative Effects

The long term effect of no action will be the gradual degradation of the Wilderness experience.

Alternative B - Recreation/Human Use Emphasis

Direct and Indirect Effects

Effects of this alternative are direct management actions taken to "harden" sites and construct "facilities" such as hitchrails and back country primitive toilets to handle the increased use. Less naturalization will be done. Repeated use of previously impacted sites is encouraged. More "primitive seats" and similar "attractions" are left in place, to concentrate use and impacts rather than impacting more areas. The effectiveness of "facilities" for preventing resource damage varies with the location of the facilities and the user group. Facilities will make the area where they are located appear less wild, reducing the wilderness experience of many of the users. Some areas, such as those where hitchrails are placed, become defacto "sacrifice areas". This Alternative is the least restrictive of recreation use, however, as in other action alternatives, a self-issuing permit is required of all users, year-round.

No special permits for stock use are required. Group limit remains at 15 people and 20 head of stock and there are no restrictions on campfires. Of action alternatives, this provides the most recreation opportunity for a maximum number of individuals and is the least restrictive of stock use. Hitchrails and toilets are not provided for user convenience but to prevent further impacts from stock containment or human waste. Possible areas where hitchrails might channel use include: Ripple Lake, junction of Hope Lake and Continental Divide Trail #9, Mystic Lake, Seymour Lake, and Johnson Lake. If toilets were installed at the possible toilet locations this would minimize sanitation problems at lakes where they were installed: Johnson, Hidden, Upper Seymour and Carpp Lakes. Wilderness characteristics would be maintained to a lesser degree than in other action alternatives because of added facilities and hardening of sites. Table Chapter IV-I shows differences between alternatives.

Stock damage would be minimized by encouraging stock users to camp in established sites, carry stock containment devices, and camp in smaller groups and by current regulations. No new stock related regulations would constrain stock users nor would added regulations influence the opportunity for campfires.

Cumulative Effects

There will be a long term degradation of wilderness quality both socially and biophysically. The area will appear less wild as more use becomes evident and there are more facilities developed to handle the additional use. For many individuals their wilderness experience will be diminished by the added facilities and increasing recreational use.

Alternative C - Emphasis On Retention Of Existing Resource And Social Conditions (Preferred Alternative)

Alternative C uses management actions to change use patterns and to decrease impact causing activities. The constraints focus on those measures which will best curtail impacts and will be least objectionable to the majority of people who use the wilderness. This alternative is less restrictive than Alternatives D and E. It does less hardening than Alternative B.

Direct and Indirect Effects

Under this alternative the permitted group size is reduced to any combination of 16. This limits the size of stock groups, including those of guided by outlitters. The effect of smaller stock groups is less damage to campsites and adjacent stock holding areas. Conflict between stock groups and hiking groups is also diminished. Large groups of stock users will be displaced to other areas outside the A-P. Campfire prohibitions with in 1/4 mile of the lakes, (listed in Table II of Chapter II, page 57), result in fewer impacts to campsites and the areas close to popular lakes. Because campfires are not allowed in some areas, some campers will chose to camp elsewhere simply because they want a campfire. Some new impacts may occur because of this displacement. These impacts will be more dispersed and can be minimized because, campers are encouraged to use "Leave No Trace" techniques and wilderness rangers continue to naturalize new campsites and downsize large campsites. Camping in existing stock use areas, packing feed, and using good containment practices can minimize damage from stock use. Hope Lake Trail #424 will remain closed to stock and stock damage will be prevented by closures for camping with stock at Sawed Cabin and Oreamnos lakes.

Cumulative Effects

Present wilderness characteristics will be maintained, areas with fire closures will actually improve in subtle ways. Users, particularly those with stock may feel slightly more constrained but constraints have a "pay-off" in wilderness quality.

Alternative D--Emphasis On Unmodified Natural Environment & Natural Processes

This alternative has the greatest number of regulations, signs, etc. within the wilderness of all the alternatives.

Direct and Indirect Effects

The feeling of freedom decreases under this alternative because of added constraints. However, the area will look more wild because of fewer impacts. Challenge may increase slightly because fewer social trails will be apparent. Controls will change use patterns and decrease impact causing activities. The ratio of zones in this Alternative is the same as in Alternative E. The increased regulations and control will necessitate increased law enforcement which can have a negative effect on the wilderness experience of the visitor. Those camping with stock will be required to obtain a permit for overnight stock use and will be required to pack feed. They will also have fewer options for camping, see stock camping closures listed in Chapter II, Table II, page 58. This alternative will not have the visual impact of resource protection facilities such as hitchrails or toilets.

Cumulative Effects

The long term effect will be a slow improvement of the physical characteristics of the wilderness by restricting or limiting use of some areas within the wilderness. As more regulations and signing are required due to increasing use and impacts of the visitors, the wilderness experience of visitors will be diminished.

Alternative E - Permit (Quota) System

Direct and Indirect Effects

Alternative E requires an agency issued permit to enter the wilderness during the primary use season. It may set a quota, ie., a limit on the number of users when and where necessary to prevent social and bio-physical impacts. This is not a self issuing permit and thus it is less convenient for the user and more constraining. It may limit numbers based on destination, allowing a set number of individuals and stock in a given lake basin or area. This type of permit is an "up front" restriction. Once inside the Wilderness there are fewer regulations, fewer signs, and fewer administrative constraints than in Alt. D. Spontaneity in trip planning decreases since permits need to be obtained before a trip. During the off season, self-issuing permits are required of all users but they will be obtained at trailhead registration boxes.

Cumulative Effects

An agency issued permit provides the most administrative control of use patterns and displacement within the A-P. This would have many advantages for resource protection. The rate of development of new campsites will slow under a mandatory permit system with set quotas. Existing size of barren core areas at established camping sites and barren core areas at lesser used campsites will not increase. Lower permitted numbers of visitors in areas of the wilderness should reduce the number of social trails at campsites, lower the number of encounters in camp, on trails and in off trail areas and improve the opportunity for solitude allowing visitor to have a better wilderness experience.

Issue 4: Clearly defined guidelines are needed for responding to increased requests for new outfitter and guide permits and for responding to requests for more user days from existing outfitters.

Managers field requests from people who want to outfit in the Anaconda-Pintler. Some of the existing outfitters request increases in their priority use days.

The A-P has permitted outfitters operating on all districts. Most outfitters are stock supported operations for hunting, summer fishing and sight-seeing trips. The size, shape and geography of the wilderness make it possible to reach most places in a days travel from a trailhead. Risk, difficulty and distances are not such that outfitted services are in high demand. Reported use days for almost all outfitters are below the priority use days specified by their permits.

Effects Common To All Action Alternatives (B-E)

In all action alternatives guidelines for responding to various requests by outfitters and guides are defined. Public scoping and internal concerns have consistently shown a desire to have clearer guidelines defining the selection process for new outfitters and for determining use days allowed existing outfitters. Outfitter and guide administration has long term bio-physical and social effects on the wilderness. It also involves people's livelihoods. It is complex and time consuming for administrators. For years there have been discussions about the need for Forest Plan direction. It is important that these guidelines be consistent throughout the Wilderness.

Direct and Indirect Effects

New outfitters are considered only under clearly defined guidelines as shown in Table II of Chapter II, page 58. These guidelines include 1) the use will not create unacceptable social or bio-physical impacts; 2) the use cannot be filled by current outfitters; 3) the new use is non-traditional, not one of the current permitted uses. This includes, but is not limited to, such uses as dog sledding or winter ski tours. A prospectus process may be used to select new outfitters. The effect of this direction is that few, if any, new outfitters will be allowed in the Anaconda-Pintler. Those that are allowed will not be in direct competition with current outfitters. The direction favors current outfitters. The only option for a traditional outfitter who is not a current permit holder is to purchase an existing business.

Use days for existing outfitters are capped at a combination of the 10 year actual use high, as shown in Table V of Chapter III, page 87, plus an additional 50 use days, if demand is there and monitoring shows that impacts are acceptable. This allows for some growth but does not increase use to a level that managers feel will damage either the biophysical or social aspects of the wilderness. Administration of current outfitters and guides emphasizes maintaining or improving current conditions to meet zone criteria in areas where they operate. No alternative allows permanent structures or caches at outfitter camps in the Anaconda-Pintler.

One hundred incidental use days, per year, per district, will be available. Incidental use days are intended for incidental, commercial or institutional use. They are not intended for repeated use by the same outfitter nor are these days intended for use by existing A-P outfitters. They may be allotted on a one time basis at the discretion of District resource managers. Days may be shared between districts. Availability of incidental use days provides flexibility for special circumstances and allows some institutional use.

Cumulative Effects

Limiting the number of outfitters and the number of use days responds to public demands and decreases the biophysical and social effects of large groups and stock use in the A-P. Clear cut guidelines give clarity and eliminate ambiguity in permit administration for both the permittee and the agency.

Alternative A - No Action

Direct, Indirect and Cumulative Effects

Guidelines for permitting new outfitters and determining the appropriate number of days for current outfitters remain unclear and each Ranger District handles requests for permits and additional use differently. Inconsistency continues between Districts in dealing with requests from potential outfitters will continue and requests for additional use days by existing outfitters will not be acted on.

ISSUE 5: Encroaching noxious weeds threaten native vegetation and habitat

The A-P is relatively weed free but weeds are appearing at trailheads, along trails and at some locations inside the wilderness boundary. Noxious weeds are a serious threat to native vegetation and the naturalness of the area.

Effects Common To All Action Alternatives (B-E)

Direct and Indirect Effects

Programmatic direction for addressing encroaching noxious weeds does not vary with action alternatives, thus the effects are the same in all alternatives. New direction provides the groundwork to deal with noxious weeds before they become a major problem. Eradication and prevention will be accomplished by a combination of methods that are described in Table II, Chapter II, page 59. This strategy maintains the Anaconda-Pintler as a weed free area where native vegetative communities have not been displaced by noxious weeds. Noxious weeds have the potential to drastically change the wilderness. Direction will help prevent weeds from gaining a foothold as they have in adjacent areas and other wildernesses. In addition to the bio-physical effects on vegetation, soils, and wildlife habitat, weeds also have a social effect. Weed prevention helps an area function and appear natural. The wilderness visitor prefers to see native vegetation rather than weed infestations. Additionally, many weeds have seeds which stick to clothing, irritate skin, and are harmful to livestock.

Cumulative Effects

Wilderness quality is enhanced by weed detection, prevention, containment, control and eradication. Clearer, consistent direction which defines response to noxious weeds will improve the condition of the wilderness and eliminate problems before they become unmanageable. With this strategy, weeds should not spread and current infestations will be reduced and be eliminated over time.

Alternative A - No Action

Direct and Indirect Effects

Since there is no specific direction that is consistent between all the Forests there will be inconsistent treatment of noxious weeds. In some areas weeds may be able to spread before they are treated. A gradual increase in the numbers of weed infestations is expected.

Cumulative Effects

Over the long term if weed infestations are not treated there will be a slow loss of the natural plant communities and wildlife habitat adjacent to and within the wilderness. Wilderness quality will decline.

ISSUE 6: Fish stocking changes native communities

The practice of fish stocking was established prior to the passage of the Wilderness Act and although it is not supported by everyone, it is a traditional practice and supports a traditional use by visitors. Stocking fish in waters of the A-P Wilderness has altered the natural biological community in and around many of the approximately 17 lakes that support fish, as well as in lakes which are currently barren but where stocking was attempted in the past. Streams have also been altered by direct stocking or by fish moving into the streams from connected stocked lakes.

Fish stocking is conducted by the Montana Fish, Wildlife and Parks in coordination with the Forest Service.

Effects Common To All Action Alternatives (B-E)

Direct and Indirect Effects

Direction which relates to fish stocking does not vary with action alternatives so the direct, indirect and cumulative effects are the same for all alternatives. Fish stocking is the responsibility of Montana Department of Fish, Wildlife and Parks and direction for specific lakes and drainages is developed cooperatively by Montana Department of Fish, Wildlife and Parks and the Forest Service. Fishless lakes will not be stocked and will remain fishless. These fishless lakes and streams serve as representatives of natural conditions without fish predation on amphibians, insects, and other species.

In Wilderness, where emphasis is on natural processes and conditions, it is intuitively evident that human introduced disturbance doesn't fit as a management strategy. However, in many cases fish stocking took place many years ago, preceding the Wilderness Act, and those populations are now naturally reproducing without supplemental stocking. In these cases a strategy will be developed by Montana Department of Fish, Wildlife and Parks and the Forest Service to contribute to the restoration of native strains of fish and native biological communities. The strategy will help protect native fish from the encroachment of exotic fish, generally rainbow and brooktrout. The effect of this new direction will be to focus management on further protection of those streams where known or suspected genetically pure strains of West Slope Cutthroat, (especially the east slope strain of west slope cutthroat) or Bull Trout exist.

Because aerial fish stocking may be continued where it was an established practice, some short-term disturbance for those in the immediate area will occur.

Cumulative Effects

The proposed actions move toward more natural conditions in lakes and streams as well as providing ongoing recreation sport fisheries as agreed cooperatively by Montana Fish Wildlife and Parks and the Forest Service. The strategy described in the programmatic direction will help maintain indigenous species and perpetuate threatened and endangered species. Over time the opportunity to catch rainbow or brook trout in the A-P will decline as native populations are favored by stocking practices.

Alternative A - No Action

Direct and Indirect Effects

Fish stocking of the high mountain lakes may continue as it has in the past using non-indigenous species with the potential to continue impacting native fish in the drainages below lakes that have been stocked.

Cumulative Effects

Long term effects will be the gradual decline in native fish populations and aquatic habitats.

ISSUE 7: Research natural areas were proposed by Forest Plans but have not yet been established.

Effects Common To All Action Alternatives (B-E)

Each of the four action alternatives designate both RNAs for long-term protection of these sites for research, monitoring, education, and biological diversity conservation. Establishment of the RNA's contributes to the national network of research areas. Establishment provides opportunities for future and current research as well as monitoring of natural processes.

Direct and Indirect Effects

Natural processes within the RNA's remain unaltered by direct human influences. The designated RNA's are protected from those activities that directly modify ecological processes, influence natural successional changes, and threaten or interfere with the objectives or purposes for which the RNA's are established. Uses are controlled so as not to detract from the objectives or the protection of the area. Consumptive uses are not be allowed. Recreation activities permitted in the RNA's do not differ from those currently present. Guidelines relating to administrative use, prescribed fire, fire suppression and other wilderness activities are listed in Chapter II on pages 34-35.

Cumulative Effects

RNA establishment enhances the research and biodiversity conservation values of Wilderness by providing additional recognition and protection for the significant ecological features of these areas.

Alternative A - No Action (Direct, Indirect And Cumulative Effects)

Under No Action Alternative A, neither of the two proposed RNA's would be formally designated. These areas allocated in the 1986 Forest Plans would continue to be managed in status quo to retain the option for future designation.

In Alternative A, protection of identified unique and representative natural features and sensitive plant and animal species, would continue to be accomplished in project or activity planning on a case-by-case basis. Use restrictions and requirements to protect those features would apply, but potential for lack of continuity of management and for the gradual loss of representative and unique natural features over time, may increase.

Change in Mystic Lake Cabin Management Strategy

Effects Common To All Action Alternatives (B-E)

Direct and Indirect Effects

Mystic Lake Cabin will remain in place and some measures, other than major vegetation modification, will be taken to protect it from fire. This management strategy will preserve this historic structure as part of the wilderness heritage. This will allow visitors the opportunity to appreciate this back country guard station and will allow continued, limited, administrative use. If protection measures are necessary, it may increase costs of fire suppression or of allowing fire to take its natural course in the area.

Cumulative Effects

The cabin will continue to add to the wilderness experience for those interested in the heritage of the A-P. Because of its presence there will be somewhat more impact in the vicinity of the cabin and the structure itself may make the immediate area seem less wild. Continued, limited, administrative use will be possible.

Alternative A

Direct and Indirect Effects

Direction in the 1977 Wilderness Management Plan specified that Mystic Cabin would be phased out over the next 5 years and evaluated for historic significance. This direction now creates a conflict since the cabin has been determined to have historic significance. The no action alternative does not recognize this significance and would not retain the cabin as an important element of historic interest to the public.

Cumulative Effects

Direction for the cabin remains unclear and does not respond to its historic significance.

ACTIONS	ALTERNATIVE A (No Action)	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
Group Size	Group size restrictions would remain unchanged. Groups of 15 people and 20 horses or less would not be restricted. The impacts, both social and biophysical of this size group would continue to occur. Campsites would become larger and proliferate.	Same as A.	Group size would change to any combination of 16. This restriction would change use patterns and would decrease both biophysical and social impacts. Large stock groups would go elsewhere or would camp and travel in smaller numbers.	Group size would decrease to any combination of 12. This restriction would change use patterns and would decrease both biophysical and social impacts. Large stock groups would go elsewhere or would camp and travel in smaller numbers.	Group size would decrease to 12 people and 15 head of stock but group activity would be regulated by permit. The impacts of groups would decrease and those denied access would go elsewhere.
Permits	Only for special uses. The non-commercial wilderness users would not have any requirement for permits. The data on use trends, type, time, place, etc. would continue to be inaccurate, incomplete, and anecdotal.	Easily obtained, self- issuing, permits would be required of all users year-round. Despite convenience some people might dislike the requirement to obtain a permit. Managers would have better data to assess use trends and their relationship to problem areas.	Same as B.	Same as B and C plus an office issued permits would also be required of all overnight stock users. This would allow less spontaneous and be less convenient for stock users and large groups but would provide an opportunity to minimize the impacts.	An agency issued permit, to be picked up at an office, would be required of all users. It could set quotas, (limits), for # of visitors in some drainages and destinations. This would decrease spontaneity and convenience for the wilderness visitor but would provide an ability to influence impacts, both social and biophysical, in a way that is not provided by any other alternative. As use inevitably increases, a quota system would provide the best protection for the

A CHILONIC		TABLE VII - EN VIRONI	MENTAL CONSEQUENCE		
ACTIONS	ALTERNATIVE A (No Action)	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
Campfires	Fires would be permitted in all locations. Impacts of campfires in fragile locations would continue to increase. These impacts include: lack of firewood, diminished micro-climate, lack of soil building materials, blackened rocks, firerings used as trash pits, compacted and sterilized soils, trails from wood gathering, hacked trees and snags, etc.	Same as Alt. A.	Areas with fire closures would improve dramatically in appearance. Wood would begin to accumulate and create micro-climates. Organic material for soil building would return to natural quanities. Other impacts of campfires would also decrease. People would forego the pleasure of a fire in the back country when camping in fire closure areas. Some people would simply camp elsewhere where fires were allowed.	Same as C except would apply to more areas. Fewer options to have campfires in the back country but more improvement in camp areas and microsites currently effected by fires and woodgathering.	Same as C.
Campsites	Campsites would increase in size and number as use increases.	Campsites would increase in size and number as use increases. Large groups and stock users would be encouraged to camp in areas which are already inpacted to minimize biophysical and social impacts. Some use would be concentrated by facilities.	Lowering of group limit would minimize displacement of other groups and slow development of large sites. Campsites might occur in new areas because of campfire closures but those in closure areas would improve in appearance.	The impacts of campsites would be minimized by closing some areas to camping and designating campsites in some places. This would require enforcement and signage.	Elimination of overcrowding would reduce enlargement of existing sites and generally prevent the creation of new sites from displacement.

ACTIONS	ALTERNATIVE A (No Action)	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
Resource Protection Facilities, (Hitch racks and Toilets)	No Change.	Some areas suggested for large groups and stock users would have hitching racks and/or toilets to minimize impacts. This might concentrate impacts and prevent the spread of increased impacts over a large area. Though limited in size and frequency, such structures make an area seem less "wild".	Fewer facilities than B. The effects of structures on resource damage is hard to assess. Strategic placement in a few key places might prevent impacts. Effects differ according to user group, number of overall users, displacement, use patterns, and many other variables.	Fewer new facilities . Some impacts may become more widespread because they are not concentrated by facilities but other impacts will be curtailed by restrictions.	By minimizing numbers with a quota system and having control of destinations the need for facilities and enforcement of special regulations w/i the A-P will be minimized.
Regulations	No Change	A self-issuing permit would be required. Other regulations would not change.	Modifying some current restrictions and putting some new ones in place would decrease resource damage but would also decrease the feeling of freedom and spontaneity. Enforcement would be necessary.	More restrictions and enforcement would be necessary. Feelings of freedom would be diminished and area would seem less "wild".	Regulations inside the A-P would be minimized. Regulation takes place before entry. Administration of the permit system would involve the front offices and require more field presence.
Outfitters and Guides	No Change.	A system would be in place who want to increase user	e for selecting new outfitters	and clear direction would ex	ist for existing outlitters
Fish Stocking	No Change	Lakes and surrounding areas would move towards more natural conditions. Fishing experiences would change in some locations.			
RNA's	No Change	RNA's would be established.			
Mystic Cabin	No Change	Cabin would not be phased out but would be retained because of its historic significance. Costs associated with fire suppression or natural fire in the area may increase since some fire protection measures may be required.			

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GLOSSARY

Administrative Camp - A large or long term camp used by the Forest Service for management activities, such as trail crew camp for a construction project or a fire camp for fire suppression/management activities.

Air Quality Related Values (AQRV) - Features or properties that are important for preserving wilderness character and that could be adversely affected by air pollution.

Airshed - A geographic area that, because of topography, meteorology, and climate, shares the same air. Class I - Any area designated for the most stringent protection from degradation, including but not limited to all wildernesses over 5,000 acres in existence as of August 1977.

Alpine - Of, relating to, or growing on elevated slopes above timberline

Appropriate Suppression Response - The planned strategy for suppression actions (in terms of kind, amount, and timing) on a wildfire which most efficiently meets fire management direction under current and expected burning conditions. The response may range from a strategy of prompt control to one of containment or confinement.

Assigned Site - A campsite temporarily designated and authorized for occupancy and use by an outfitter for a specific length of time where no permanent facilities are permitted and the outfitter is charged a use fee. Interchangeable with a Reserved Site or Priority Use Site.

Barren Core area - The central core of a campsite (usually an area around the fire ring) that absorbs an inordinate amount of use and therefore is devoid of vegetation. Usually estimated in square meters or feet.

Best Management Practices (BMP) - A practice or combination of practices that are the most effective and practical means of preventing or reducing pollution from nonpoint sources.

Cache - A place for storing (usually concealed) unwieldy equipment when a site is not occupied, or a place for storing supplies for future use. Caches are generally used for administrative or resource protection purposes.

Carrying Capacity - The maximum level of use an area can sustain without exceeding the social and environmental conditions set by management.

Cathole - A small hole dug for one time use to bury human waste. Catholes are dug away from water sources, campsites and trails, approximately six to eight inches deep in mineral soil.

Desired Future Conditions - Management objectives to be achieved sometime in the future.

Dismantled - Completely disassembled to the basic components from which it was originally constructed.

Drop Camp - A temporary unreserved campsite used by an individual or party who compensates an outfitter for packing camp equipment, people, meat or supplies to or from the site. The camp is removed when the client terminates their stay. The outfitter is responsible for cleanup of the site.

Ecosystem- Includes all the organisms of an area, their environment, and the linkages or interactions between them; all parts of an ecosystem are interrelated. The fundamental unit in ecology, containing both organisms and abiotic environments, each influencing the properties of the other and both necessary for the maintenance of life.

Encounter - Coming into contact with a person or a group at relatively close range (sight and sound).

Exotic Species - A species that enters or is introduced into the ecosystem beyond its historical range, except through a natural expansion.

Goal - Concise statements describing a desired end result, normally expressed in general terms.

Grazing- Foraging for food by domestic livestock (sheep, cattle, horses, etc).

Group Size - The maximum number of persons authorized to travel and camp together at one time (also referred to as party size).

Guidelines - A preferred or advisable course of action that describes resource conditions and methods for conducting activities specific to the planning area.

Hardening - The practice of preparing a site so that it enables the site to receive certain uses without significant damage.

Heritage Resources - A building, site, structure, object, or historic district which possess historical significance.

High Use Season -That part of a calendar year where the majority of use for a given area takes place. Considered to be July 1 - September 15 for the Anaconda Pintler Wilderness.

Indicator - Items that can be measured to gauge the overall condition.

Incidental Use - Use in relation to outfitter and guides that is 50 service days or less and is anticipated to have little or no significant impact on public health and safety, the environment, or other authorized uses and activities.

Indigenous Species - Any species present in an ecosystem in its historic range, or naturally expanded from its historic range. Species of fish traditionally stocked before wilderness designation may be considered indigenous if the species is likely to survive.

Institutional Groups - A variety of membership or limited-constituency institutions, such as religious, conservation, youth, fraternal, service club, and social groups; educational institutions, such as schools, colleges and universities; and similar common interest organizations and associations. This category may also include permit applicants who operate commercially on a limited or intermittent basis in providing service to select customer clientele rather than to the public at large.

Interdisciplinary Team - A group of individuals with different training assembled to solve a problem. An interdisciplinary team is assembled because no single scientific discipline is sufficient to adequately identify and resolve issues and problems. Team member interaction provides necessary insight to all stages of the process.

Issue - A subject or question of widespread public discussion or interest regarding management of National Forest System lands.

Krummholz - A growth form assumed by tree species at the upper treeline or in the alpine zone; characterized by a creeping and multi-stemmed growth pattern due to desiccation and physical damage caused by wind and blowing ice crystals near the upper treeline.

Landscape - The fundamental traits of a specific geographic area, including its biological composition, physical environment and anthropogenic or social patterns.

Limits of Acceptable Change (LAC) - A planning system in which the amount of change to be allowed is measured by means of quantitative standards. Appropriate management actions are identified and procedures for monitoring and evaluating management performance are established.

Linear - In relations to a trail, considered to be the trail plus 200 feet on each side.

Management Action - Any activity undertaken as part of the administration of the Forest.

Management Goal - A concise statement that describes a desired condition of the land that is to be achieved.

Management Ignited Fire - A fire started by a scheduled, deliberate management action.

Mechanized Equipment - Any contrivance for moving people or material in or over land, water, or air, having moving parts, that provides a mechanical advantage to the user and that is powered by a living or nonliving power source. This includes, but is not limited to , sailboats, hang gliders, parachutes, bicycles, game carriers, carts and wagons. It does not include wheelchairs when used as necessary medical appliances. It also does not include skis, snowshoes, rafts, canoes, sleds, travois or similar primitive devices without moving parts.

Minimum Tool - Apply only the minimum impact policy, device, force, regulation, instruments or procedure to bring about a desired result.

Monitoring- Systematic gathering, comparing and evaluation of data.

Motorized Equipment - Machines that use a motor, engine, or other nonliving power sources. This includes, but is not limited to, such machines as chain saws, aircraft, snowmobiles, generators, motor boats and motor vehicles. It does not include small battery or gas powered hand carried devices such as shavers, wristwatches, flashlights, cameras, stoves or other similar small equipment.

National Environmental Policy Act (NEPA) - An act of Congress that declared the productive harmony with nature and protection of the environment to be a national policy.

National Forest Management Act of 1976 - An act of Congress that directed, among other things, the preparation of Land and Resource Management Plans for each unit of the National Forest System.

Naturalized - An area that is rehabilitated to its natural state, to the degree that is possible, removing all evidence of humans long term use.

Non-system Trail - Any trail regardless of origin, not included on the Forest Service trail inventory.

Noxious weeds - Any exotic plant species established or that may be introduced in the state which may render land unfit for agriculture, forestry, livestock, wildlife, or other beneficial uses and which is designated as a statewide noxious weed by rule of the department; or as a district noxious weed by a board, following public notice or intent and a public hearing.

Objective - Statements describing desired resource conditions or ranges of conditions intended to achieve goals. Must be defined in a manner that allows measurement. No associated time frames.

Occupancy - Camping, caching, leaving or storing equipment, or having a camp in place (tent. etc) even if unattended or unoccupied by humans.

Operation Plan - A plan mutually formulated by the holder and the authorized officer under which an outfitter will conduct operations and manage camps while occupying National Forest System lands.

Packstock - Domestic animals used to transport people or equipment from one location to another (not including dogs).

Permanent Facilities/structures - Anything built or constructed from native or nonnative materials that remains from year to year. Also referred to as permanent improvements.

Permit - A special use authorization which provides permission, without conveying an interest in land, to occupy and use National Forest System land or facilities for specified purpose, and which is revocable, terminable and non-compensable.

Permitted Camp - A camp permitted under special use permit, e.g. an outfitters camp.

Portals - Any point of entry into the Wilderness.

Prescribed Natural Fire Plan - A plan that permits certain fires to burn in a manner that duplicates natural conditions as much as possible. The policy allows for fires ignited by lightning to burn under pre-planned, specified conditions and objectives.

Prescription - A set of criteria identified before ignition for the use of prescribed fire within defined conditions to accomplish specific land and resource management objectives.

Preservation - A visual quality objective that allows ecological changes only. Management activities except for very low visual impact recreation facilities are prohibited.

Priority Use - A Forest Service commitment to the holder of a permit for outfitting and guiding to give priority consideration to granting the holder a specific amount of available future use. A reserved amount of use assigned to the holder by the Forest

Service based on the holder's past use, carrying capacity, and allocation decisions made through forest planning.

Puncheons - Structures constructed out of log stringers and wood decking utilized for crossing wet areas with trails.

Recreational Livestock - Animals used primarily in conjunction with recreation such as horses, mules, etc.

Refuse - Items or material that is brought into the wilderness and discarded. Garbage.

Research Natural Area- Areas set aside to preserve representative ecosystems for scientific study and educational purposes.

Retention - A visual quality objective that provides for management activities which are not usually evident. Under retention, activities may only repeat form, line, color, and texture which are frequently found in the characteristic landscape.

Riparian - An area of land or water that includes stream channels, lakes, floodplains and wetlands, and their adjacent ecosystems.

Roving Mile - A one mile diameter area on a map, based on a movable, circular template.

Sensitive Species - Species identified by the Regional Forester or the Forest Supervisor for which National Forest management activities may have an adverse effect and are on an official State list, under review for federally threatened or endangered status, and have populations where viability on the Forest is a concern.

Service Day - A day or portion of a day for which an outfitter or guide provides goods or services to a client, including transportation.

Snag - A non-living standing tree. The interior of the snag may be sound or rotted.

Social Trail - A trail that develops as a result of repeated use, for example around a campsite going to water, fishing trails around a lake, trails between campsites, etc.

Solitude - The quality or state of being alone.

Spike Camp - An additional campsite used by a party travelling on an extended trip who has another main camp.

Standard - A numerical value assigned to an indicator for measuring social or resource conditions.

Structures/Facilities - These include toilets, stock-tie areas, bridges, culverts, turnpikes including geotextile.

Subalpine - Upper mountain vegetation immediately below the cold limits or tree and tall shrub growth.

Suitability Study - A study by an interdisciplinary team to determine the appropriateness of applying certain resource management practices to a particular area of land.

Suitable Range - An area of land that can be grazed by a given class of livestock under a given management system without environmental damage.

System Trails - Trails listed on the Forest Service's inventory of trails.

Temporary Facilities/structures - Anything built or constructed from native or nonnative materials that is dismantled and removed after its season of use and is not used for resource protection (excludes standard camping gear).

Trailhead - A portal (entry) to the Wilderness that has improvements (ie trailhead registration box, parking, stock transfer areas, toilets, etc)

Trampling- Walking on vegetation and soil by humans and packstock which may cause: abrasion of vegetation, abrasion of surface soil organic layers, and compaction of soils.

Turnpikes - Structures constructed with log sides and earth fill to cross wet areas with trails.

Untrammeled - In the context of the Wilderness Act, an untrammeled area is where human influence does not impede the free play of natural forces or interfere with natural processes in the ecosystem.

User-built trail - Any trail constructed without Forest Service approval by someone wanting to access a particular point or area.

Vegetative Buffer - An area of healthy herbaceous ground cover, of sufficient width and density to filter sediments produced from the existing or proposed area to be disturbed before they enter surface waters of streams or lakes.

Visual Quality Objective (VQO) - Categories of acceptable landscape alteration measured in degrees of deviation from the natural appearing landscape.

Waterbars - Structures that are installed in trails to turn water off the trail to reduce surface erosion. Commonly constructed from logs or rocks.

Watershed - The entire area that contributes water to a drainage system or stream.

Wilderness Resource Specialist - Pre-selected individuals serving as a Wilderness Specialist/Resource Advisor for fire based on these qualifications: Knowledge in Wilderness objectives and policy, Familiar with rehabilitation procedures and techniques, Knows and can implement the minimum Impact Suppression Tactics guide, Has Standards for survival and Knowledgable fire background

Wildfire - Any wildland fire not designated and managed as a prescribed fire within an approved prescription.

Wheelchair - A device designed solely for use by a mobility-impaired person for locomotion.

Acronyms

BLM- Bureau of Land Management, U.S. Department of the Interior

CFR- Code of Federal Regulations

EA- Environmental Assessment

EIS- Environmental Impact Statement

FWS- Fish and Wildlife Service, U.S. Department of the Interior

IDT- Interdisciplinary Team

NEPA- National Environmental Policy Act of 1969

RNA- Research Natural Area

USFS- United States Forest Service, U.S. Department of Agriculture

APPENDIX I - WILDERNESS ACT - (P.L. 88-577)

THE WILDERNESS ACT OF 1964

Public Law 38-577-88th Congress, S. 4 September 3, 1964

AN ACT

To establish a National Wilderness Preservation System for the permanent good of the whole people, and for other purposes.

Be a enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

Willemess Act

SHORT TITLE

SECTION 1. This Act may be cited as the "Wilderness Act".

WILDERNESS SYSTEM ESTABLISHED STATEMENT OF POLICY

Sec. 2. (a) In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to seture for the American people of present and future generations the benefits of an enduring resource of wilderness. For this purpose there is hereby established a National Wilderness Preservation System to be composed of federally owned areas designated by Congress as "wilderness areas", and these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness; and no Federal lands shall be designated as "wilderness areas" except as provided for in this Act or by a subsequent Act.

(b) The inclusion of an area in the National Wilderness Preservation System notwithstanding, the area shall continue to be managed by the Department and agency having jurisdiction thereover immediately before its inclusion in the National Wilderness Preservation System unless otherwise provided by Act of Congress. No appropriation shall be available for the payment of expenses or salaries for the administration of the National Wilderness Preservation System as a separate unit not shall any appropriations be available for additional personnel stated as being required solely for the purpose of managing or administering areas solely because they are included within the National Wilderness Preservation System.

DEFINITION OF WILDERNESS

(c) A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitade or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

NATIONAL WILDERNESS PRESERVATION SYSTEM—EXTENT OF SYSTEM

Sec. 3. (a) All areas within the national forests classified at least 30 days before the effective date of this Act by the Secretary of Agriculture or the Chief of the Forest Service as "wilderness", "wild", or "cance" are hereby designated as wilderness areas. The Secretary of Agriculture shall—

78 STAT. 990. 78 STAT. 991. The Wilderness Act

- (1) Within one year after the effective date of this Act, file a map and legal description of each wilderness area with the Interior and Insular Affairs Committees of the United States Senate and the House of Representatives, and such descriptions shall have the same force and effect as if included in this Act. *Provided, however*, That correction of clerical and typographical errors in such legal descriptions and maps may be made.
- (2) Maintain, available to the public, records pertaining to said wilderness areas, including maps and legal descriptions, copies of regulations governing them, copies of public notices of, and reports submitted to Congress regarding pending additions, eliminations, or modifications. Maps, legal descriptions, and regulations pertaining to wilderness areas within their respective jurisdictions also shall be available to the public in the offices of regional foresters, national forest supervisors, and forest rangers.
- (b) The Secretary of Agriculture shall, within ten years after the enactment of this Act, review, as to its suitability or nonsuitability for preservation as wilderness, each area in the national forests classified on the effective date of this Act by the Secretary of Agriculture or the Chief of the Forest Service as "primitive" and report his findings to the President. The President shall advise the United States Senate and House of Representatives of his recommendations with respect to the designation as "wilderness" or other reclassification of each area on which review has been completed, together with maps and a definition of boundaries. Such advice shall be given with respect to not less than one-third of all the areas now classified as "primitive" within three years after the enactment of this Act, not less than two-thirds within seven years after the enactment of this Act, and the remaining areas within ten years after the enactment of this Act. Each recommendation of the President for designation as "wilderness" shall become effective only if so provided by an Act of Congress. Areas classified as "primitive" on the effective date of this Act shall continue to be administered under the rules and regulations affecting such areas on the effective date of this Act until Congress has determined otherwise. Any such area may be increased in size by the President at the time he submits his recommendations to the Congress by not more than five thousand acres with no more than one thousand two hundred and eighty acres of such increase in any one compact unit, if it is proposed to increase the size of any such area by more than five thousand acres or by more than one thousand two hundred and eighty acres in any one compact unit the increase in size shall not become effective until acred upon by Congress. Nothing herein contained shall limit the President in proposing, as part of his recommendations to Congress, the alteration of existing boundaries of primitive areas or recommending the addition of any contiguous area of national forest lands predominantly of wilderness value. Norwithstanding any other provisions of this Act, the Secretary of Agriculture may complete his review and delete such area as may be necessary, but not to exceed seven thousand acres, from the southern tip of the Gore Range-Eagles Nest Primitive Area, Colorado, if the Secretary determines that such action is in the public interest.
- (c) Within ten years after the effective date of this Act the Secretary of the Interior shall review every roadless area of five thousand contiguous acres or more in the national parks, monuments and other units of the national park system and every such area of, and every roadless island within, the national wildlife refuges and game ranges, under his jurisdiction on the effective date of this Act and shall report to the President his recommendation as to the suitability or nonsuitability of each such area or island for preservation as wilderness. The President shall advise the President of the Senate and the Speaker of the House of Representatives of his recommendation with respect to the designation as wilderness of each such area or island on which review has been completed, together with a map thereof and a definition of its boundaries. Such advice shall be given with respect to not less than one-third of the areas and islands to be reviewed under this subsection within three years after enactment of this Act, not less than two-thirds within seven years of enactment of this Act, and the remainder within ten years of enactment of this Act. A recommendation of the President for designation as wilderness shall become effective only if so provided by an Act of Congress. Nothing contained herein shall, by implication or otherwise, be construed to lessen the present stanutory authority of the Secretary of the Interior with respect to the maintenance of roadless areas within units of the national park system.
- (d)(1) The Secretary of Agriculture and the Secretary of the Interior shall, prior to submitting any recommendations to the President with respect to the suitability of any area for preservation as wilderness—
 - (A) give such public notice of the proposed action as they deem appropriate, including publication in the Federal Register and in a newspaper having general circulation in the area or areas in the vicinity of the affected land:
 - (B) hold a public hearing or hearings at a location or locations convenient to the area affected. The hearings shall be announced through such means as the respective Secretaries involved deem appropriate, including notices in the Federal Register and in newspapers of general circulation in the

Classification.

Presidential recommendation to Congress.

Congressional approval

78 STAT. 891. 78 STAT. 892

Report to President

Presidential recommendation to Congress.

Congressional approval.

Suitability

Publication in Federal Register.

Hearings

Publication in Federal Register. 79 STAT, 892 78 STAT, 893

Proposed modification.

16 USC 475. 16 USC 528-531.

16 USC 577-577b.

16 USC 577c-577h. 16 USC 577d-L 577g-L 577h.

39 Stat. 535. 16 USC 1 es seg.

41 Seat, 1063. 49 Seat, 938.

78 STAT, 893. 78 STAT, 894 area: *Provided*, That if the lands involved are located in more than one State, at least one hearing shall be held in each State in which a portion of the land lies:

- (C) at least thirty days before the date of a hearing advise the Governor of each State and the governing board of each county, or in Alaska the borough, in which the lands are located, and Federal departments and agencies concerned, and invite such officials and Federal agencies to submit their views on the proposed action at the hearing or by no later than thirty days following the date of the hearing.
- (2) Any views submitted to the appropriate Secretary under the provisions of (1) of this subsection with respect to any area shall be included with any recommendations to the President and to Congress with respect to such area.
- (e) Any modification or adjustment of boundaries of any wilderness area shall be recommended by the appropriate Secretary after public notice of such proposal and public hearing or hearings as provided in subsection (d) of this section. The proposed modification or adjustment shall then be recommended with map and description thereof to the President. The President shall advise the United States Senare and the House of Representatives of his recommendations with respect to such modification or adjustment and such recommendations shall become effective only in the same manner as provided for in subsections (b) and (c) of this section.

USE OF WILDERNESS AREAS

- Sec. 4. (a) The purposes of this Act are hereby declared to be within and supplemental to the purposes for which national forests and units of the national park and national wildlife refuge systems are established and administered and—
 - (1) Nothing in this Act shall be deemed to be in interference with the purpose for which national forests are established as set forth in the Act of June 4, 1897 (30 Stat. 11), and the Multiple-Use Sustained-Yield Act of June 12, 1960 (74 Stat. 215).
 - (2) Nothing in this Act shall modify the restrictions and provisions of the Shipstend-Nolan Act (Public Law 539, Seventy-first Congress, July 10, 1930; 46 Stat. 1020), the Thye-Blamik Act (Public Law 733, Eightieth Congress, June 22, 1948; 62 Stat. 568), and the Humphrey-Thye-Blamik-Andersen Act (Public Law 607, Eighty-fourth Congress, June 22, 1956; 70 Stat. 326), as applying to the Superior National Forest or the regulations of the Secretary of Agriculture.
 - (3) Nothing in this Act shall modify the statutory authority under which units of the national park system are created. Further, the designation of any area of any park, monument, or other unit of the national park system as a wilderness area pursuant to this Act shall in no manner lower the standards evolved for the use and preservation of such park, monument, or other unit of the national park system in accordance with the Act of August 25, 1916, the statutory authority under which the area was created, or any other Act of Congress which might pertain to or affect such area, including, but not limited to, the Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. 432 et seq.); section 3(2) of the Federal Power Act (16 U.S.C. 796(2)); and the Act of August 21, 1935 (49 Stat. 666; 16 U.S.C. 461 et seq.).
- (b) Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character. Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

PROHIBITION OF CERTAIN USES

(c) Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

SPECIAL PROVISIONS

- (d) The following special provisions are hereby made:
- (1) Within wilderness areas designated by this Act the use of aircraft or motorboats, where these uses have already become established, may be permitted to continue subject to such restrictions as the Secretary of Agriculture deems desirable. In addition, such measures may be taken as may be necessary in the control of fire, insects and diseases, subject to such conditions as the Secretary deems desirable.

The Wilderness Act

- (2) Nothing in this Act shall prevent within national forest wilderness areas any activity, including prospecting, for the purpose of gathering information about mineral or other resources, if such activity is carried on in a manner compatible with the preservation of the wilderness environment. Furthermore, in accordance with such program as the Secretary of the Interior shall develop and conduct in consultation with the Secretary of Agriculture, such areas shall be surveyed on a planned, recurring basis consistent with the concept of wilderness preservation by the Geological Survey and the Bureau of Mines to determine the mineral values, if any, that may be present; and the results of such surveys shall be made available to the public and submitted to the President and Congress.
- (3) Norwithstanding any other provisions of this Act, until midnight December 31, 1983, the United States mining laws and all laws pertaining to mineral leasing shall, to the same extent as applicable prior to the effective date of this Act, extend to those national forest lands designated by this Act as "wilderness areas"; subject, however, to such reasonable regulations governing ingress and egress as may be prescribed by the Secretary of Agriculture consistent with the use of the land for mineral location and development and exploration, drilling, and production, and use of land for transmission lines, waterlines, telephone lines, or facilities necessary in exploring, drilling, producing, mining, and processing operations, including where essential the use of mechanized ground or air equipment and restoration as near as practicable of the surface of the land disturbed in performing prospecting, location, and, in oil and gas leasing, discovery work, exploration, drilling, and production, as soon as they have served their purpose. Mining locations lying within the boundaries of said wilderness areas shall be held and used solely for mining or processing operations and uses reasonably incident thereto; and hereafter, subject to valid existing rights, all patents issued under the mining laws of the United States affecting national forest lands designated by this Act as wilderness areas shall convey title to the mineral deposits within the claim, together with the right to cut and use so much of the mature timber therefrom as may be needed in the extraction, removal, and beneficiation of the mineral deposits, if needed timber is not otherwise reasonably available, and if the timber is cut under sound principles of forest management as defined by the national forest rules and regulations, but each such patent shall reserve to the United States all title in or to the surface of the lands and products thereof, and no use of the surface of the claim or the resources therefrom not reasonably required for carrying on mining or prospecting shall be allowed except as otherwise expressly provided in this Act. Provided. That, unless hereafter specifically authorized, no patent within wilderness areas designated by this Act shall issue after December 31, 1983, except for the valid claims existing on or before December 31, 1983. Mining claims located after the effective date of this Act within the boundaries of wilderness areas designated by this Act shall create no rights in excess of those rights which may be patented under the provisions of this subsection. Mineral leases, permits, and licenses covering lands within national forest wilderness areas designated by this Act shall contain such reasonable stipulations as may be prescribed by the Secretary of Agriculture for the protection of the wilderness character of the land consistent with the use of the land for the purposes for which they are leased, permitted, or licensed, Subject to valid rights then existing, effective January 1, 1984, the minerals in lands designated by this Act as wilderness areas are withdrawn from all forms of appropriation under the mining laws and from disposition under all laws pertaining to mineral leasing and all amendments thereto.
- (4) Within wilderness areas in the national forests designated by the Act, (1) the President may, within a specific area and in accordance with such regulations as he may deem desirable, authorize prospecting for water resources, the establishment and maintenance of reservoirs, water-conservation works, power projects, transmission lines, and other facilities needed in the public interest, including the road construction and maintenance essential to development and use thereof, upon his determination that such use or uses in the specific area will better serve the interests of the United States and the people thereof than will its denial; and (2) the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture.
- (5) Other provisions of this Act to the contrary norwithstanding, the management of the Boundary Waters Canoe Area, formerly designated as the Superior, Little Indian Sioux, and Caribou Roadless Areas, in the Superior National Forest, Minnesota, shall be in accordance with regulations established by the Secretary of Agriculture in accordance with the general purpose of maintaining, without unnecessary restrictions on other uses, including that of timber, the primitive character of the area, particularly in the vicinity of lakes, streams, and portages: *Provided*, That nothing in this Act shall preclude the continuance within the area of any already established use of motorboats.
- (6) Commercial services may be performed within the wilderness areas designated by this Act to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.

Mineral leases, claims, etc.

78 STAT. 894. 78 STAT. 895.

Water resources.

78 STAT. 995. 78 STAT. 896

Transfers, restriction.

78 STAT, 896.

Acquisition,

- (7) Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.
- (8) Nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish in the national forests.

STATE AND PRIVATE LANDS WITHIN WILDERNESS AREAS

- SEC. 5. (a) In any case where State-owned or privately owned land is completely surrounded by national forest lands within areas designated by this Act as wilderness, such State or private owner shall be given such rights as may be necessary to assure adequate access to such State-owned or privately owned land by such State or private owner and their successors in interest, or the State-owned land or privately owned land shall be exchanged for federally owned land in the same State of approximately equal value under authorities available to the Secretary of Agriculture: *Provided, however*, That the United States shall not transfer to a State or private owner any mineral interests unless the State or private owner relinquishes or causes to be relinquished to the United States the mineral interest in the surrounded land.
- (b) In any case where valid mining claims or other valid occupancies are wholly within a designated national forest wilderness area, the Secretary of Agriculture shall, by reasonable regulations consistent with the preservation of the area as wilderness, permit ingress and egress to such surrounded areas by means which have been or are being customarily enjoyed with respect to other such areas similarly situated.
- (c) Subject to the appropriation of funds by Congress, the Secretary of Agriculture is authorized to acquire privately owned land within the perimeter of any area designated by this Act as wilderness if (1) the owner concurs in such acquisition or (2) the acquisition is specifically authorized by Congress.

GIFTS, BEQUESTS, AND CONTRIBUTIONS

- SEC. 6. (a) The Secretary of Agriculture may accept gifts or bequests of land within wilderness areas designated by this Act for preservation as wilderness. The Secretary of Agriculture may also accept gifts or bequests of land adjacent to wilderness areas designated by this Act for preservation as wilderness if he has given sixty days advance notice thereof to the President of the Senate and the Speaker of the House of Representatives. Land accepted by the Secretary of Agriculture under this section shall become part of the wilderness area involved. Regulations with regard to any such land may be in accordance with such agreements, consistent with the policy of this Act, as are made at the time of such gift, or such conditions, consistent with such policy, as may be included in, and accepted with, such bequest
- (b) The Secretary of Agriculture or the Secretary of the Interior is authorized to accept private contributions and gifts to be used to further the purposes of this Act.

ANNUAL REPORTS

SEC. 7. At the opening of each session of Congress, the Secretaries of Agriculture and Interior shall jointly report to the President for transmission to Congress on the status of the wilderness system, including a list and descriptions of the areas in the system, regulations in effect, and other pertinent information, together with any recommendations they may care to make.

Approved September 3, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 1538 accompanying H. R. 9070 (Comm. on Interior & Insular Affairs) and No. 1829 (Comm. of Conference).

SENATE REPORT No. 109 (Comm. on Interior & Insular Affairs).

CONGRESSIONAL RECORD:

Vol. 109 (1965): Apr. 4, 8, considered in Senate.

Apr. 9, considered and passed Senate.

Vol. 110 (1964): July 28, considered in House.

July 30, considered and passed House, amended, in lieu of H. R. 9070.

Aug. 20, House and Senate agreed to conference report.

APPENDIX II

HOW PROPOSED ACTIONS RELATE TO THE 1977 PLAN

In a number of areas direction will not change from the 1977 A-P Wilderness Plan which is currently an Appendix to the three Forest Plans. This direction will remain part of the Forest Plans. With increased use and over thirty years since the Anaconda-Pintler became a Wilderness, further direction is needed in some areas. These are detailed in the Purpose and Need.

Desired future condition and clearer guidelines, objectives and standards are provided by these alternatives. Mechanisms are provided to determine if Wilderness quality is improving, declining or holding its own. Possible actions to counter threats or declining trends need to be detailed.

Differences that occur within the Wilderness are planned for and recognized. The boundary does not make all 160,000 acres homogeneous in terms of the bio-physical and social characteristics which influence wilderness quality.

The current A-P plan is organized in the following chapters. Many can stand virtually as they are currently written in terms of content though the amount of detail or format may change. The Chapters that relate to issues and will be supplemented by this direction are starred **. Those areas that remain the same, are not starred. Current Forest Plan direction for the A-P, not involved with these issues and this analysis, will not change.

I. ADMINISTRATION (no major changes, update)

II. RECREATION **

Much of the proposed change in direction relates to the impacts of recreation. Various management actions are associated with various alternatives.

III. TRAILS AND TRAVEL

No changes in access.

IV. SIGNING

No change in policy.

V. INFORMATION AND EDUCATION

No changes, ongoing efforts to use this tool.

VI. LAND OCCUPANCY

Update, no changes in policy.

VII. OUTFITTERS **

Specific direction is provided by the proposed action.

VIII. FISH AND WILDLIFE **

Somewhat different than plan direction though many of the current concerns were touched on in 1977. Focus on the issue of fish stocking and it's relationship to natural ecosystems and a native fishery, including sensitive species such as Bull Trout and West Slope Cutthroat.

IX. VEGETATION **

Standards, guidelines and objectives relating to recreation use impacts. Updated direction for noxious weeds. Establishment of RNA's.

X. FIRE

Replaced by the A-P Fire Guidelines which updated the Fire Management Action Plan (part of the Forest Plans) in 1993.

XI. WATER **

Proposed actions relating to recreation use will minimize impacts to riparian areas. No other changes in direction.

XII. SOILS **

Proposed actions relating to recreation use will minimize impacts to soil.

XIII. MINING AND MINERALS

No change in direction.

XIV. COLLECTION OF RESOURCE AND USE INFORMATION**

Proposed mandatory permit would change and improve collection of use information.

XV. SCIENTIFIC STUDY **

Establishment of the two RNA's. Otherwise no major change.

XVI. CULTURAL AND HISTORIC RESOURCES

No change.



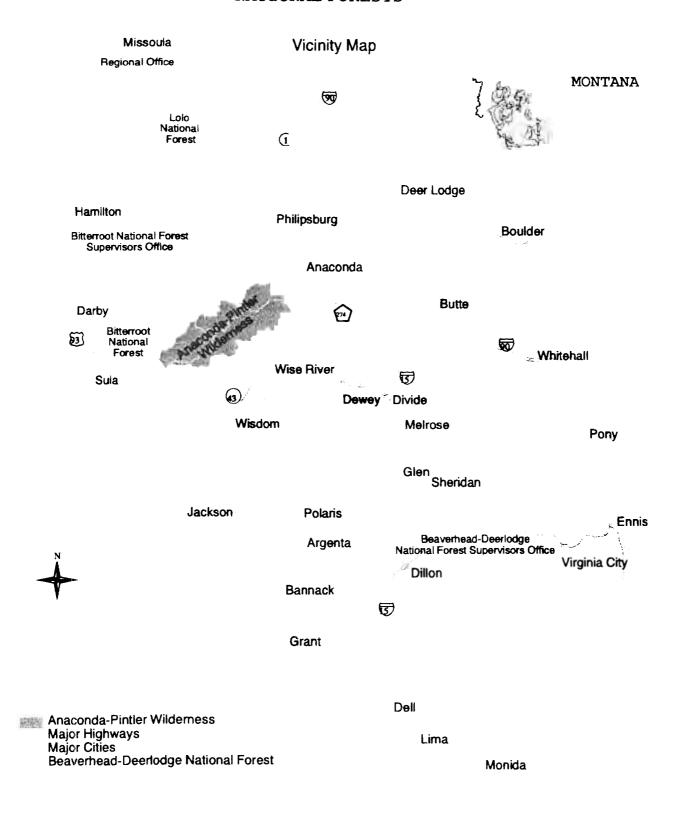


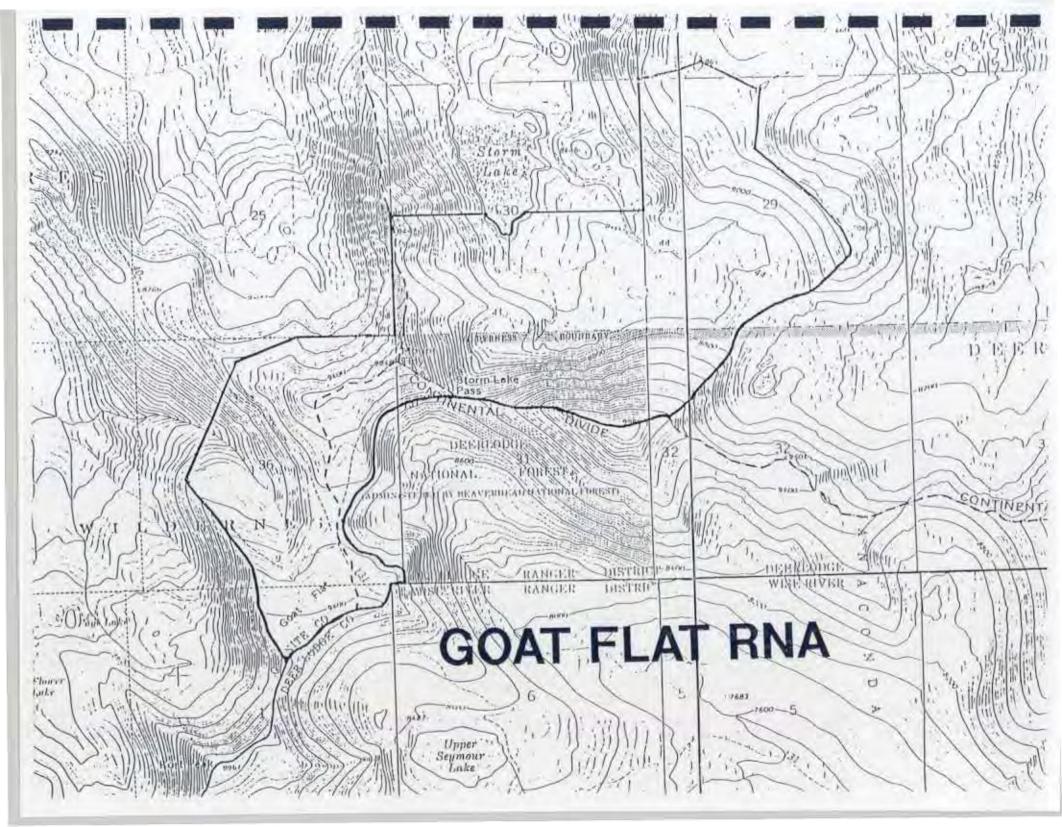
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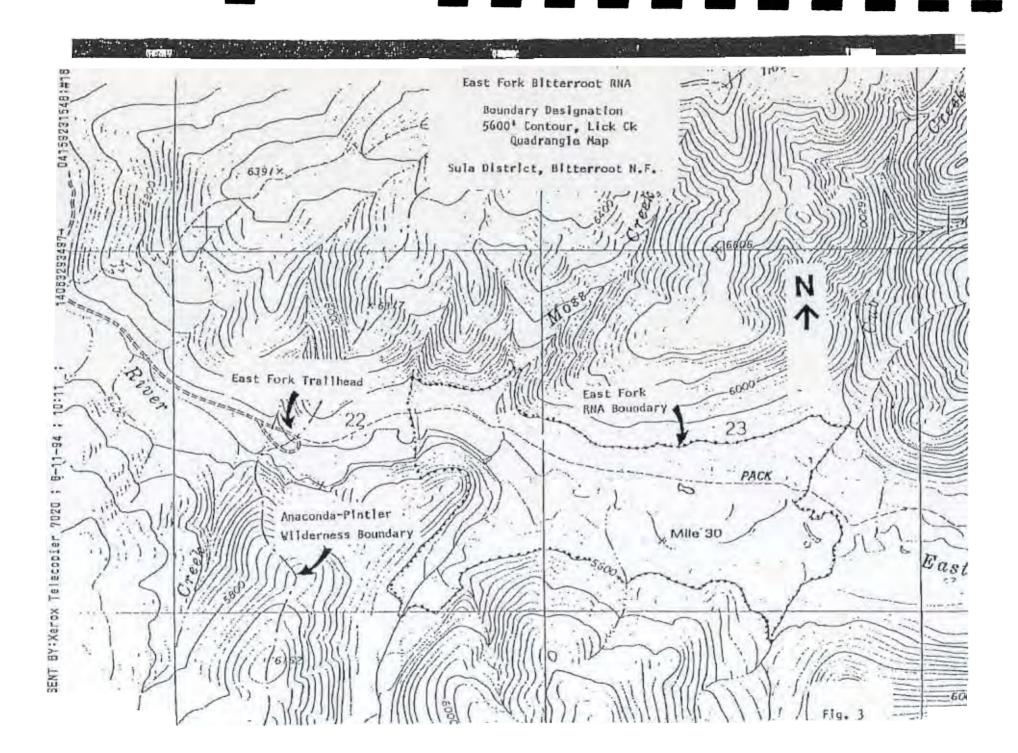
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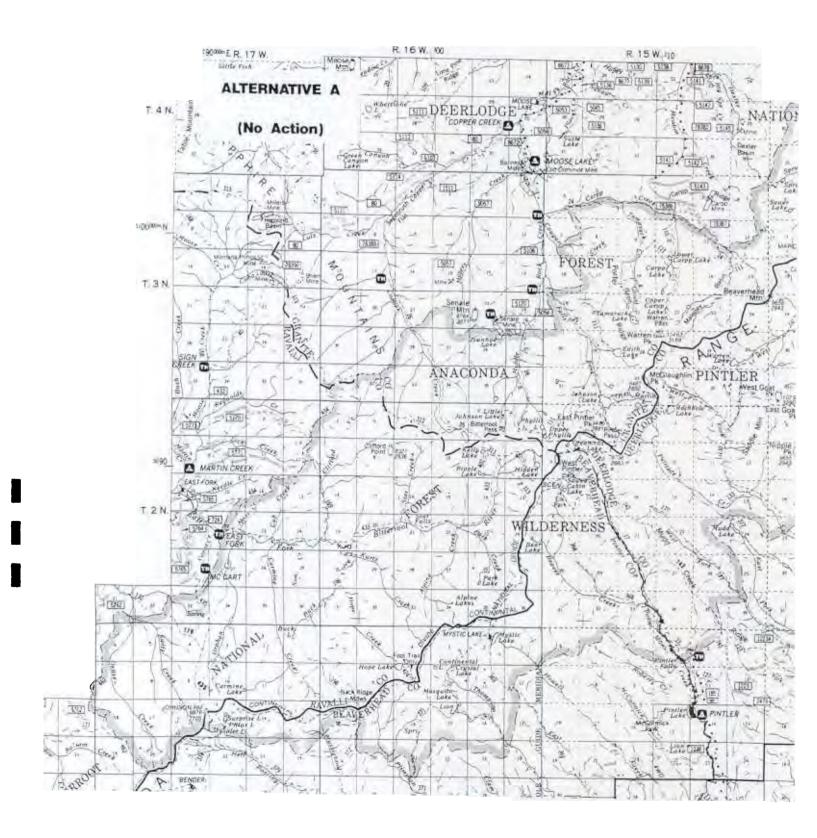
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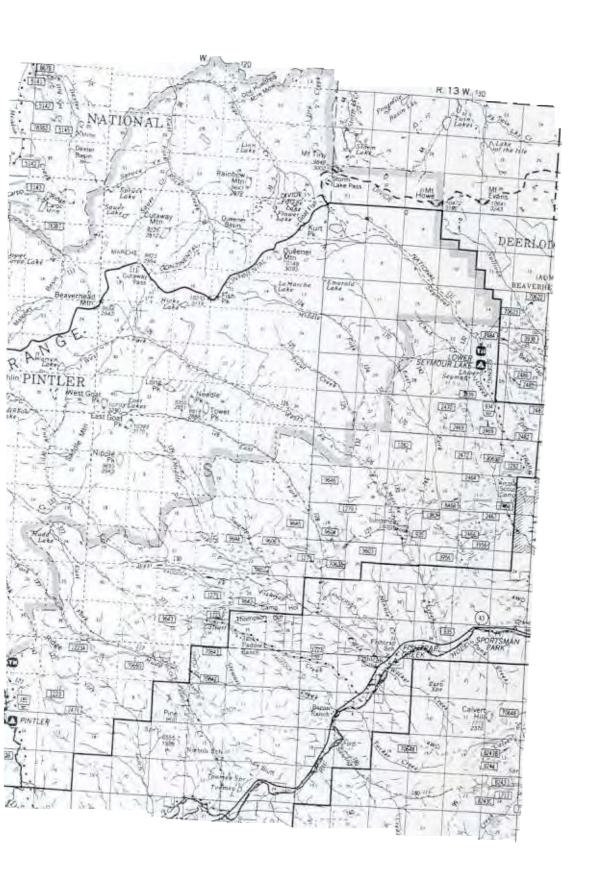
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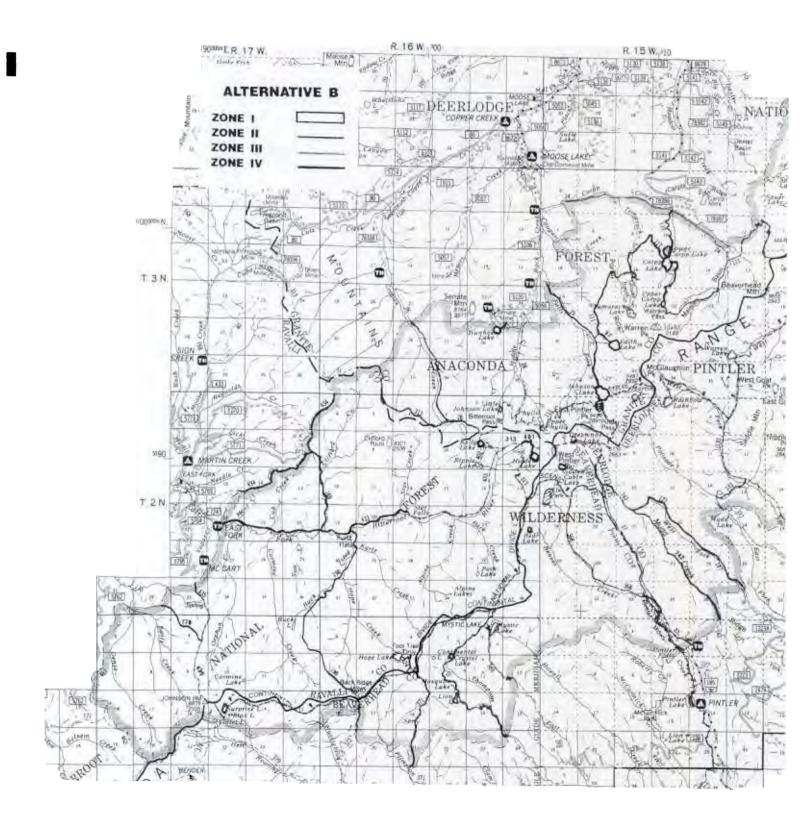


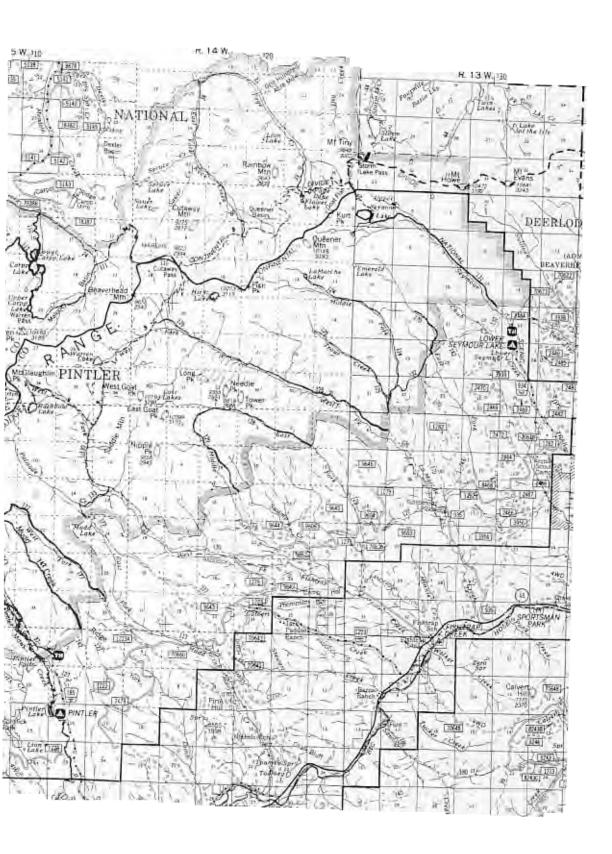


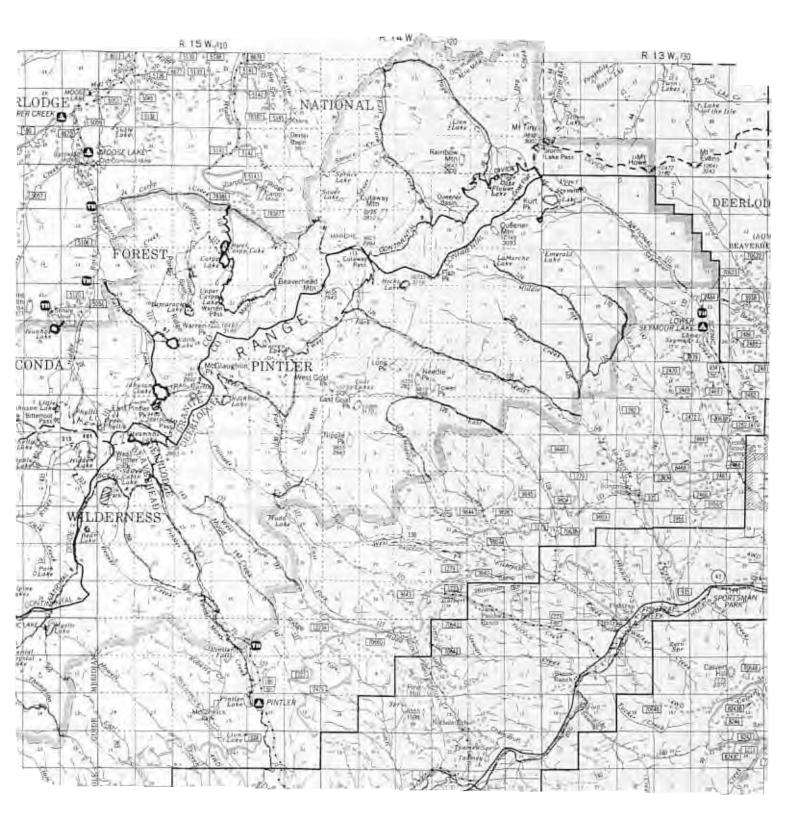


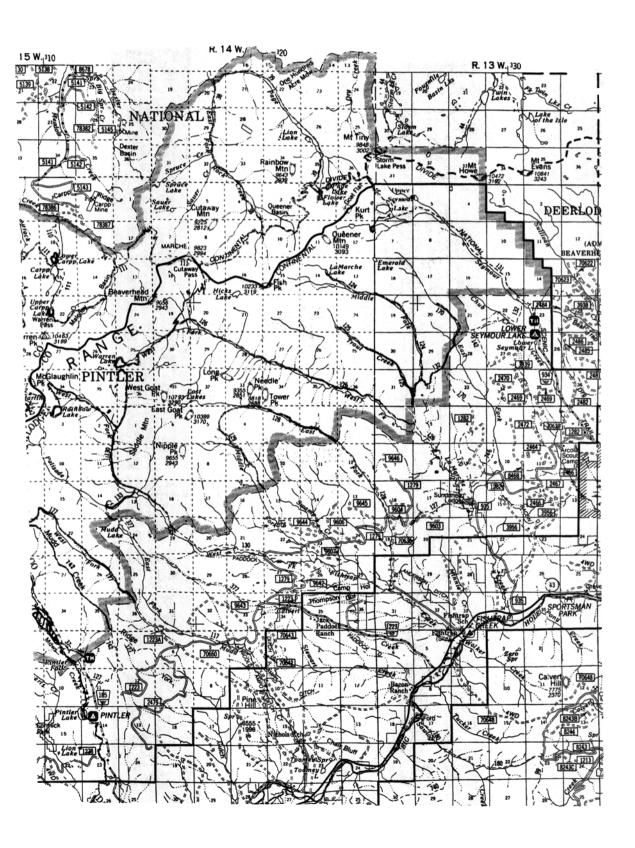


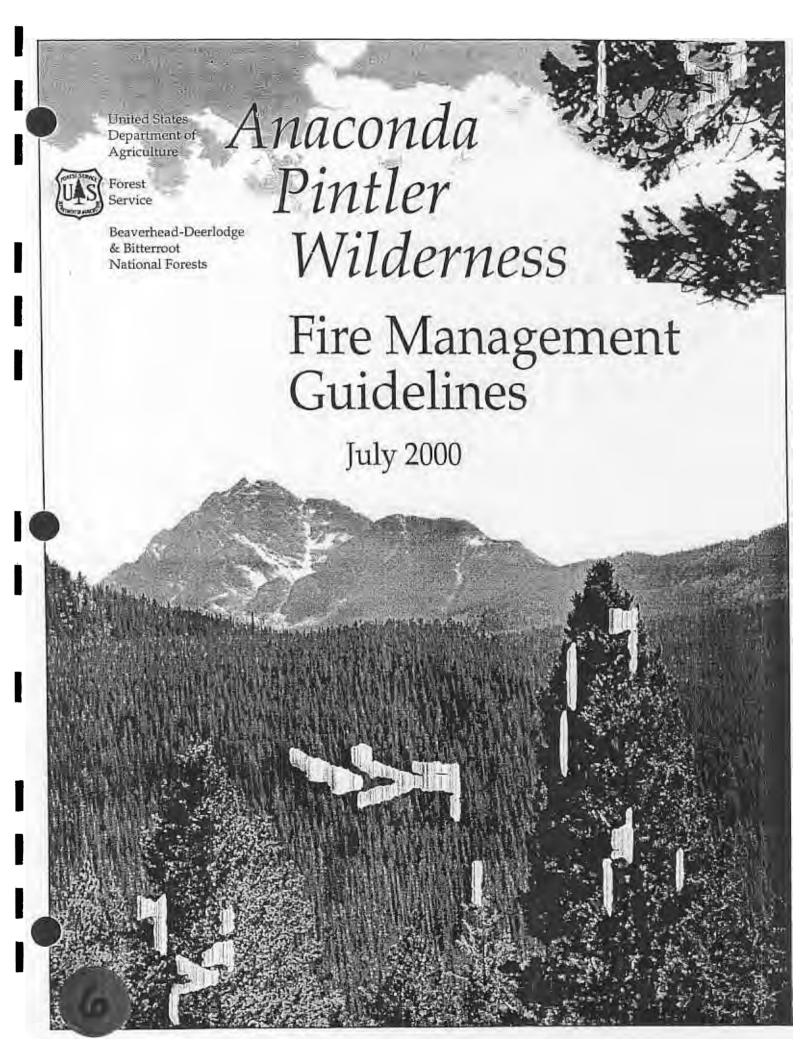












ANACONDA PINTLER WILDERNESS FIRE MANAGEMENT GUIDELINES JULY 2000

July 9, 2000

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SUMMARY

The Fire Management Plan for the Anaconda Pintler Wildemess was completed in 1979. The Anaconda Pintler (A-P) Wilderness Fire Management Guidelines were prepared for the implementation of prescribed natural fire and updated in 1993. A second update of the A-P Wilderness Fire Management Guidelines occurred in 2000. The reasons for the updates and a description of the reasons for the changes in the Guidelines are described in the following sections.

2000 UPDATE

The Federal Wildland Fire Management Policy and Program Review was completed in December of 1995. As a result of new federal policies regarding wildland fire suppression, wildland fire use and prescribed fire have been implemented. These new policies include changes in terminology, planning and implementation of fire management activities. One of the more significant changes was the development of the Wildland and Prescribed Fire Management Policy Implementation Reference Guide (Implementation Guide). Forest Service Manual 5140.32 instructs fire management staff and line officers to comply with the direction in the Implementation Guide that pertains to wildland fire use in the A-P Wilderness is the reason for the 2000 update. Some of the more significant changes to the A-P Wilderness Fire Management Guidelines consist of the following:

- New terminology has been incorporated into the document that is consistent with the current Federal Wildland Fire Management Policy. The term prescribed natural fire is no longer used. It has been replaced with wildland fire use.
- The planning process and documents associated with the implementation of a wildland fire use project have changed. A Wildland Fire Implementation Plan (WFIP) replaces the Prescribed Natural Fire Burn Plan. The decision process consists of three stages and a periodic assessment in which the decision authorities, time frames and activities for each stage differ significantly from the former process that consisted of three decision levels.

Graphs and charts displaying climatological information and fire behavior outputs have been updated.

The format and arrangement of the document have been altered. Obsolete sections and forms have been eliminated and new ones added. All forms, graphs and maps have been moved to the appendix along with the delegation of authority letters and other information that is updated annually.

There were no changes that would alter or invalidate the original NEPA decision that allowed the use of fire in the Anaconda Pintler Wildemess. The area in which fire is allowed to play its natural role in the wilderness did not change. One minor change was made to the objective statement regarding fire fighter and public safety.

As with the previous update, this document will be incorporated into each Forest's Fire Management Plan which will direct the wildland fire use program in the Anaconda Pintler Wilderness.

1993 UPDATE

Following the 1988 fire season, a national task force was created to study the federal "prescribed natural fire" policy. The task force recommended tightening guidelines in existing fire management plans. In response to the review team's recommendation, the Forest Service developed criteria, in manual direction under 5140, which must be addressed in fire management plans.

To comply with the new direction, an interdisciplinary team was formed to update the 1979 Fire Management Plan for the Anaconda Pintler Wilderness. This plan allowed for the use of prescribed natural fire. The team found that the 1979 plan addressed most of the points. However, the plan needed some changes. The most notable changes are as follows:

- Incorporated drought information which will be used when evaluating risk. The other factors used
 to determine risk include time of year, location, forest fuel type, distance from the wilderness
 boundary, and the estimated size the fire could attain under normal and extreme weather
 conditions.
- Updated weather and fire behavior runs for each of the five fire zones.

A maximum allowable perimeter, a boundary which the fire should not exceed, will be established for each fire. If the fire burns beyond the maximum allowable perimeter, it will be declared a wildfire and appropriate suppression actions taken.

- Incorporated stricter provisions for daily revalidation that include availability of equipment and
 resources to keep the prescribed fire within prescription. Each day the decisions about the fire will
 be reevaluated and approved by the responsible official.
- Updated burn plan format which includes all the requirements listed under 5140 in the Forest Service Manual.

This document will be incorporated into each Forest's Fire Management Plan which will direct the prescribed natural fire program in the Anaconda Pintler Wilderness. It will provide a consistent and coordinated approach among the two forests and four ranger districts involved.

This plan does not address management ignited fire. The line officers from the Forests decided early in the review process to only address 5140 FSM direction as now required. They agreed to stay with the basic direction given in the 1979 Anaconda Pintler Fire Management Plan. If monitoring shows we are not returning natural fire to the wilderness, then this decision will be revisited based on that data.

CHAPTER 1 - OBJECTIVES

Wilderness is defined in the Wilderness Act of 1964... "as an area where the earth and its community of life are untrammeled by man... retaining its primeval character and influence... which is protected and managed so as to preserve its natural conditions and which... generally appears to have been affected primarily by the forces of nature...."

1.1 GOALS

Permit lightning caused fires to play, as nearly as possible, their natural ecological role within wilderness.

Reduce, to an acceptable level, the risks and consequences of wildfire within or escaping from the wilderness.

1.2 OBJECTIVES

1.2.1 Safety

No personal injuries. Fire fighter and public safety is the first priority in every fire management activity.

1.2.2 Ecology

Lighting fires are a primary, natural disturbance in the Anaconda Pintler Wilderness. Decisions to allow fire to play its natural role will **not** be based on benefits to wildlife, maintenance of certain vegetative types, improvements in forage, or enhancement of recreational corridors. Instead fire, not human whims or wishes, should define the landscape to the extent life and property are not unduly threatened.

Fire may occur in a variety of ways ranging from low intensity, creeping ground fires to high intensity stand replacement fires encompassing large acreages. A successful program will permit fire to operate at all levels of the ecological spectrum which, as past history indicates, will result in a mixture of successional stages of vegetation.

Specific indicators that ecological objectives are being achieved:

- A perpetuation of the fire dependent forest ecosystems within the wilderness
- A continuation of a natural mosaic of vegetation which will produce fires of a more natural size and intensity
- A maintenance of plant and animal interrelationships that have evolved with fire
- Natural levels of fuel accumulation

Current research, records, and study in the Anaconda Pintler are not sufficient to provide quantitative measures for the above considerations. However, the knowledge we do have and studies in other areas tell us that suppression has substantially changed the natural condition. The amount of change varies with each fire zone and is discussed, to a limited extent, in Chapter 2.

Wilderness gives us an opportunity to assess ecological integrity of entire landscapes. We lose some of this integrity if we eliminate fire. Wilderness provides an invaluable link in ecosystem management. Wilderness, if fire is playing as natural a role as possible, provides a relatively unmodified reference area for assessing and monitoring natural/baseline conditions and their variation. It provides an area for assessing long term variation. Wilderness provides an area to learn about composition, structure, and function of natural systems that are substantially free of manipulation. If natural fire is kept out, this becomes a form of "manipulation" and the system may no longer give us the same answers.

In addition to natural variability, wilderness provides us with an opportunity to look at various scales, especially larger and longer scales, than are possible on fragmented lands. Wilderness also conserves biological diversity, on many scales, and provides an opportunity to study and understand ecological function. Vegetation is discussed in more detail in Chapter 2.

1.2.3 Air Quality

Does not violate federal air quality standards in any communities from wildland fire use in the Anaconda Pintler Wilderness. These standards are outlined in the State Implementation Plan developed by the State of Montana's Air Quality Bureau. The Clean Air Act classified wilderness as Class I areas that are to be protected from human caused air pollution.

1.2.4 Recreation

Provide opportunities for the public to observe natural processes occurring from and within areas where it is safe to camp and travel.

1.2.5 Resource and Social Impacts

Protect life and property.

1.2.6 Fish and Wildlife

Fire operating as a natural process sustains the biodiversity of the plant communities, fisheries, and wildlife populations within the wildemess.

1.2.7 Wildfire

Suppression efforts protect the integrity of the wilderness and do not cause undue damage. The primary objective for suppression in wilderness will be to take the appropriate suppression response, which results in the least-cost-plus-loss, while still meeting land management objectives. Minimum impact suppression tactics give direction on fire fighting activities. Minimum impact suppression guidelines will be a part of Fire Management Plans, all guard schools, and pre-season briefings of crews.

CHAPTER 2 - DESCRIPTION OF AREA

2.1 INTRODUCTION

The Anaconda Pintler Wilderness Fire Management Unit, with proposed additions, has been divided into five zones (Table 1). Each zone has fuel characteristics that differ from adjacent zones and physical properties that would require different fire management considerations or risks from its neighbors. These zones are delineated on a map in Appendix A.

Table 1. Anaconda Pintler Wilderness Fire Management Zones.

Fire Management Zones	Name	Acres
Zone 1	High Elevation	45,280
20110 1	proposed addition*	4,100
Zone 2	Cutaway	11,460
2016 2	proposed addition*	2,600
Zone 3	Northwest Slope	40,366
2016 0	proposed addition*	3,100
Zone 4	Mystic	35,980
20116 4	proposed addition*	23,900
Zone 5	Wise River	26,000
20116 0	proposed addition*	None

^{*}These areas will be included in this plan should they become wilderness.

Each of the above defined zones has some similar fuel characteristics and some unique fuel characteristics. In an attempt to characterize fuel conditions and fire effects within each of the zones, we will refer to Fire Groups (Fischer and Clayton, 1983) and Fuel Models (Deeming and others, 1977).

Fire Groups are based on the forest habitat types of Montana and are grouped in Fire Groups based primarily on fire's role in forest succession. For each Fire Group, information is presented on the relationship of major tree species to fire, fire effects on the undergrowth, forest fuels, the natural role of fire, fire and forest succession, and fire management considerations. Further information on the specific Fire Groups for the habitat types east of the Continental Divide can be found in "Fire Ecology of Montana Forest Habitat Types East of the Continental Divide, Fischer and Clayton, GTR #INT-141".

Fuel Models are mathematical models that quantify a rating of the fire behavior of a given set of fuels. Fuel properties are organized into four groups: grass, shrub, timber, and slash. These mathematical models require descriptions of the fuel properties as inputs to calculate fire danger indices or fire behavior potential. Further information on Fuel Models can be obtained by reading "Aids to Determining Fuel Models for Estimating Fire Behavior, Anderson, 1982, GTR #INT-122".

Refer to Appendix A for fire group and fuel map for the Anaconda Pintler Wilderness.

Table 2. Fire Occurrence for Anaconda Pintler Wilderness Fire Management Zones and Proposed Additions (1979-1999).

	Zo	ne I		ne I		ne I		ne V		ne /
Size (class/acres)	W	PA	W	PA	₩	PA	W	PA	W	PA
Lightning Caused (Wildfire)										
A <.25	7				17	1	33	5	1	
B (.25-9.9)	4		1		1		15	8	2	
C (10-99.9)							4		1	
D (100-299.9)	1						2			
E (300-999.9)										
Human Caused (Wildfire)										
A	3		1		3		1			
В	1				3		3		3	
С										
D										
E										
Wildland Fire Use										
A		1		5		3				
В		1								
С						1		1		
D								1		1

W = Designated Wildemess

PA = Proposed Addition

During the time the previous wildemess fire management plans were in effect, between the years 1979 and 1999, there were a total of nine wildland fire use projects (including projects formerly identified as prescribed natural fires) in the A-P Wilderness. The fires ranged in size from 0.10 acre to 150 acres. The two largest fires were the East Fork Fishtrap Fire (125 acres) and the Star Falls Fire (150 acres). A 40 acre fire occurred in Dense Creek and a 35 acre fire near Bitterroot Pass. Other fires include one Class A fire near Rainbow Lake on Wise River District, three on the Sula District in the Dense and Swift Creek areas, and one in the Spruce Creek area on the Pintler District.



2.2 ANACONDA PINTLER ZONE DESCRIPTIONS

2.2.1 Zone 1 - High Elevation

Description

Fire Management Zone 1, the high elevation zone, occupies both sides of the Continental Divide, generally above 8,000 feet in elevation. All four Ranger Districts have administrative responsibilities for their respective portion of the zone. The zone is National Forest land with the exception of Section 31, T4N, R13W, which is in private ownership. The only known structure in this zone is Sawed Cabin on Pintler Creek near Sawed Cabin Lake in Section 7, T2N, R15W. This structure is being nominated to the National Register of Historic Places. There is no continuous fuel near the structure.

Most of the zone is made up of the barren, rugged topography associated with the Rocky Mountain Continental Divide. Generally the slopes are greater than 40%. Prevailing winds during the summer months are generally from the west and can be quite strong and erratic over the Divide; however, weather records from Wise River and Philipsburg indicate wind speeds normally in the range of 3 to 11 mph. Generally the Continental Divide runs southwest to northeast, making the overall aspect northwest and southeast. Precipitation ranges from 40 to 60 inches in this zone.

Forest Plan allocation along the wilderness boundary generally consists of rock scree. The area is classified primitive roadless or semiprimitive. Most of Zone 1 is surrounded by the other four fire zones; very little Zone 1 exists along the boundary.

Less than 40% of the zone is forested with continuous timber. Timbered areas are primarily in the upper headwaters of the major drainages. The balance of the zone could experience fire starts, but a lack of fuel would prevent significant spread. The fuels in Zone 1 are categorized in Table 3.

Table 3. Zone 1 - High Elevation Acres by Fire Group and Fuel Model

Fire Group	Fuel Model	Acres	Map Key
VIII	8	7,700	8-VIII
VIII	10	3,000	10-VIII
VI	10	3,800	10-VI
V	8	1,300	8-V
VII	10	900	10-VII
Rock scattered timber, alpine X		<u>28,600</u>	Χ
Approximate Land Area in Zone 1		45,300	

There have been no large fires on record originating in this zone; however, portions of two large fires, one on the west side of the Divide in Queener Basin and one on the east side in the Middle Fork of LaMarche Creek, burned into the zone from lower elevations. There have been 18 smaller fires occurring in the zone since 1926. Twelve of these were lightning caused wildfires, four were human caused wildfires, and two were wildland fire use projects natural fires. The largest fire occurred in 1940 and reached 128 acres.



The natural fire occurrence is about one fire every fifth year. The lack of large fires in the zone is undoubtedly due to the short season, moist conditions and discontinuous fuel. However, a conservative estimate is that six of the eighteen (approximately 45%) fires occurring since reliable records have been kept showed growth potential, i.e., those that went to size Class B or larger, regardless of suppression activities. Undoubtedly more would have shown growth potential if suppression action had not been taken. An assumption can be made that since natural fires occur in the zone about once every fifth year, and of these, there is a 45% chance that the ignition will coincide with weather conditions conducive to fire spread, then at least once every ten years we can expect a fire in Zone 1 with growth potential. The last Class B or larger fire in this zone occurred in 1968.

Fire Behavior Estimate

The continuous timber component in this zone is primarily in the stringer bottoms of the drainages, and they are surrounded by barren, rocky areas. About 46% of the continuous timber is in late successional stages, and the accumulated fuels are available for fire spread. Fuel loading in these areas ranges from 15 to 30 tons per acre. These fuels have been characterized by NFFL Fuel Model 10. Local fire weather records were used to estimate fire behavior potential with the BEHAVE program. For Zone 1, Philipsburg fire weather was used to represent the west side of the Divide and Wise River fire weather for the east side. An estimate of expected fire behavior characteristics is shown in Tables 4 and 5.

Table 4. Zone 1 - High Elevation Fire Behavior Estimates. Weather data was derived from the PHILIPSBURG fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 10.

Level ¹	A	B	С	D
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	. 39	54
Forward Rate-of-Spread (chains/hour)	6-8	7-9	8-10	9-12
Growth Rate (acres/hour)	1-2	1-2	2-3	3-5
Fireline Intensity (BTU/S/FT)	100-150	120-180	150-220	200-275
Crown Scorch ³ (feet)	15-25	20-30	20-40	30-45
Flame Length (feet)	3-5	3-6	4-7	5-8

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.



Table 5. Zone 1 - High Elevation Fire Behavior Estimates. Weather data was derived from the WISE RIVER fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 10.

Level	Α	В	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	28	38	46	59
Forward Rate-of-Spread (chains/hour)	6-9	9-11	10-12	10-14
Growth Rate (acres/hour)	.5-1	1-3	2-4	3-5
Fireline Intensity (BTU/S/FT)	100-180	175-230	250-300	275-325
Crown Scorch ³ (feet)	15-25	20-30	20-50	25-60
Flame Length (feet)	3-6	4-6	5-7	6-8

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

About 54% of the forest area is in Fuel Model 8. These are more open Douglas-fir, whitebark pine, and subalpine fir stands with sparse undergrowth and a thin layer of ground fuels but still considered as continuous fuels. A simulation of expected fire behavior in these fuels is illustrated in Tables 6 and 7.

Table 6. Zone 1 - High Elevation Fire Behavior Estimates. Weather data was derived from the PHILIPSBURG fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 8.

Level	Α	B	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	39	54
Forward Rate-of-Spread (chains/hour)	1-3	1-4	2-50	2-5
Growth Rate (acres/hour)	.15	.15	.5-1	.5-1
Fireline Intensity (BTU/S/FT)	6-15	6-15	10-20	10-20
Crown Scorch ³ (feet)	1-2	1-2	1-3	1-3
Flame Length (feet)	1-2	1-2	1-3	2-3

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Table 7. Zone 1 - High Elevation Fire Behavior Estimates. Weather data was derived from the WISE RIVER fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 8.

Level	A	B	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	28	38	46	59
Forward Rate-of-Spread (chains/hour)	2-3	2-4	2-40	3-5
Growth Rate (acres/hour)	01	.15	.5-1	1-2
Fireline Intensity (BTU/S/FT)	5-15	5-15	10-20	10-25
Crown Scorch ³ (feet)	1-3	1-3	2-3	2-4
Flame Length (feet)	1-2	1-2	1-2	1-3

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

Fireline intensities are quite low producing low intensity ground fires in most cases which burn through surface fuels and remove a portion of the litter and duff.

Fire Effects

<u>Fire Group 5:</u> Fire Group Five occupies 1,300 acres at the lower limits of this zone. These are cool dry Douglas-fir habitat types. Fires controlled stocking levels and thinned out suppressed trees and maintained stands in an open, park-like condition. Periodic low intensity surface fires minimized the occurrence of stand replacement fires. Fire exclusion has allowed the development of dense, stagnant, multi-storied stands that will burn as wind-driven crown fires when conditions are favorable. It is in this group, where fires were most frequent, that fire suppression has had the greatest effect.

<u>Fire Group 6</u>: Fire Group Six occupies nearly 4,000 acres in this zone. These are relatively moist Douglas-fir habitat types with lodgepole pine occurring as a major seral component.

Fire history studies conducted in Fire Group Six stands in southeastern Montana indicate a mean fire interval of 42 years for presettlement stands.

Fire was important as a thinning agent and as a stand replacement agent. Low to moderate intensity fires converted dense pole-sized or larger stands to a fairly open condition.

Repeated low intensity burning maintained stands in a park-like condition. High intensity fires probably occurred in dense, fuel-heavy stands and resulted in stand replacement.

Fire has a demonstrable effect on wildlife habitat in Group Six through its effects on food plants. The combination of opening up stands by killing overstory trees, reducing competition by removing understories, and rejuvenating sprouting plants through top kill, can significantly increase the availability of palatable browse and forage.



² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Fire's role as a stand replacement agent becomes more pronounced when the natural fire-free interval is increased through fire suppression.

Fire Group 7: Fire Group Seven occupies less than 1,000 acres in this zone. These are cool habitat types usually dominated by lodgepole pine. Periodic wildfires seem to maintain these stands in lodgepole pine regardless of the indicated potential climax on these sites.

About 7,500 feet in elevation, the role of fire in these lodgepole pine forests differs from the classic pattern. At these altitudes the fire season is relatively short, productivity is low, mountain pine beetle activity is inhibited by low temperatures and the short growing season, and the overall pattern of fire dependence is correspondingly subdued. Fire frequency more closely resembles that of subalpine forests (about 150 years in the Northern Rockies). Romme (1980) has estimated a mean fire interval of 300 to 400 years for stand replacing fires in subalpine forests of Yellowstone National Park. Ordinarily, the spread of fires is extremely limited. Small, lightning-caused fires burn out patches of forest several acres in area and then die out. The result is a mosaic of age classes, not the uniform single-aged forests prevalent on many lower elevation sites (Day 1972).

Fire Group 8: In this zone, Fire Group Eight occupies over 10,000 acres where spruce or subalpine fir are the indicated climax species. These habitats occur at the upper cold limits of Douglas-fir. Where Douglas-fir does occur on these habitats, it is often frost-stunted. The seedling/sapling stage on such habitats will often be populated about equally with lodgepole pine, spruce, and subalpine fir. Fires occurring in this stage will return shrubs and herbs to dominance. In the absence of fire, a mixed species pole stand develops that is susceptible to destruction by a moderate to high intensity fire. Some lodgepole pine could survive a low intensity fire, resulting in an open pole stand with predominantly lodgepole pine regeneration. Subsequent low intensity fire would keep the understory open.

In the absence of fire, an open mature lodgepole forest would develop with a spruce and fir understory. Periodic fire in this stage could maintain lodgepole on the site. In the absence of fire, the more tolerant spruce and fir will eventually attain dominance.

Without fire, the original mixed species pole stand will develop into a mature mixed species forest. A moderate to high intensity fire at this stage could destroy the stand. A moderate intensity fire could, however, spare some lodgepole. The continued absence of fire will allow a near climax spruce and subalpine fir forest to develop and, theoretically, a climax subalpine fir forest. Both of these forests would be highly susceptible to moderate to high intensity fires. Succession following such fires would be without lodgepole pine since lodgepole pine is not a member of the near-climax forest. Lodgepole pine and often spruce dominate most seral stands. Whitebark pine occurs as an accidental or minor seral species. Fire history data for this group east of the Continental Divide is lacking. However, observed fire scars show the occurrence of periodic low to moderate intensity ground fires at 40-70 year intervals with stand replacement fires occurring in stringer bottoms at 100-150 year intervals.

Fire Group 10: Fire Group Ten occupies the majority of the rock and scattered timber in the upper subalpine zone. These are high elevation forests near and at the timberline. All the stands lie above the climatic limits of Douglas-fir, and many stands are above the cold limits of lodgepole pine. Whitebark pine is usually well represented. Englemann spruce is also a major long-lived seral species. Lodgepole pine may occur on some upper subalpine sites.



Timberline forests are composed of alpine larch, whitebark pine, Englemann spruce, and subalpine fir. Trees characteristically grow in groups with open areas in between. Undergrowth is usually sparse.

Fire is secondary to site factors (climate and soil) as an influence on forest development on these sites. The cold, moist, rocky, snowbound, unproductive, and otherwise fire-resistant environment that makes up much of this group not only makes fires infrequent but severely limits their extent. Lightning does ignite fires, but the paucity of continuous fine surface fuels coupled with the rain that commonly accompanies thunderstorms effectively limits fire spread and intensity. Fire frequencies ranging from 35 to 300 years have been reported for individual sites (Romme 1980). Such figures are difficult to interpret because a fire may involve only one or two trees in a stand. For this reason, the concept of fire frequency does not apply well in upper subalpine and timberline sites.

In the more continuous forests of this group, the most pronounced fire effect is to produce stand replacing fires at long intervals, perhaps 200 years or more. Stand replacement fires in Group Ten are most likely to occur during extended drought conditions when wind-driven crown fires develop in the forests below and burn into the upper subalpine and timberline forests. Vegetation recovery following such fires is usually slow because of the extremely short growing season and cold climate.

Extensive areas of whitebark pine in this zone are dead from mountain pine beetle, old age, and succession to subalpine fir. Whitebark pine forests have been found to be important food producers for Clarks nutcrackers, bears, and squirrels. These sites are fragile and easily damaged by firefighting suppression tactics. It is essential in these ecosystems to allow fire to play its natural role.

Summary for Zone 1

Most of the continuous timber areas have not experienced a stand replacement fire for at least 90 years. We can expect a fire, with potential to spread, about once every ten years. When this occurs, the fire will probably burn upslope into timberline, killing portions of the overstory. The fire will die out of its own accord, leaving behind a mosaic of burned and unburned islands producing uneven-aged groups of trees and brush. Drainage bottoms should revegetate quickly to grasses, forbs and shrubs and to trees within 10 to 20 years; however, upper slopes may remain barren for many years, slowly producing grasses and forbs as the soil mantle returns. Because of the nature of the soils and parent materials in this zone, no erosion damage outside the wildemess boundary should occur from fires burning entirely within Zone 1.

The majority of the fires occurring in this zone will remain small, usually less than one-quarter acre, burning on the ground and possibly torching out small groups of trees. These fires will usually burn out naturally, but may smoulder until conditions allow for spread.

A probability analysis of the weather records for the Philipsburg and Wise River weather stations was done to estimate the occurrence of fire ending events and significant fire spread events. Philipsburg weather records for the period from 1955 through 1992 were analyzed. Wise River weather records for the period from 1961 through 1992 were also analyzed.

Using the model it is estimated that both weather stations have the potential for a fire ending event (the occurrence of .25 inches of rain or more, coinciding with a significant reduction in the daily ERC for two or more days) to occur in July, September and October. A low probability was shown for a wetting rain or

significant ERC reduction in August. Wetting rains were historically shown in July, August, September, and October.

Waiting time probability distributions for both stations were generated (see Appendix B). The probability of a critical spread event occurring before a fire ending weather event is graphically illustrated on the following pages. From the graph it can be observed that the distribution of possible waiting-times for the tenth critical spread event resides far to the right of the waiting-times for the fire ending event. Because the waiting-times for a fire ending event are so much shorter than for the critical spread event (except for a small amount of overlap around 60 days from July 1), there is only a slight chance that the wait for the tenth critical spread event would be less than the wait for the fire ending weather event. For a more detailed discussion refer to Appendix B.

2.2.2 Zone 2 - Cutaway

Description

Fire Management Zone 2 is entirely on the Pintler District on the west side of the Continental Divide. It lies against the wilderness boundary in the northeast corner of the wilderness. It is the smallest Fire Management Zone in the Anaconda Pintler. It has been designated a separate zone because it is isolated from the other continuous fuel zones. The zone is entirely National Forest land and there are no known structures within it. The upper portions of the zone are at about 8,000 feet and the lower boundary is about 7,500 feet in Dry Creek and 6,200 feet in the East Fork of Rock Creek. Slopes are generally over 40%. These two major drainages run north out of the zone, making aspects generally westerly and easterly. Average annual precipitation is from 30 to 40 inches.

Prevailing winds are westerly, making that portion of the boundary east of Dry Creek the most vulnerable area for fires to escape from the wilderness. Most of this boundary, however, is a rocky ridge running north from Mount Tiny with very little fuel, except at the extreme northeast comer of the boundary.

Approximately 90% of Forest Plan allocation along the boundary is large blocks of undeveloped land with primitive and/or semiprimitive dispersed recreation. It is a mix of forest and grassland types. Only 10% is productive timber land. With the exception of the East Fork of Rock Creek road, there is not roaded access to Zone 2.

About 90% of the zone is forested with fuels capable of supporting fire spread. The balance is barren areas and scattered timber areas with fuels too sparse to support significant spread. The fuels in Zone 2 are categorized in Table 8.

Table 8. Zone 2 - Cutaway Acres by Fire Group and Fuel Model.

Fire Group	Fuel Model	Acres	Map Key
VI	10	5,000	10-VI
VI	8	800	8-VI
VIII	10	2,200	10-VIII
VIII	8	400	8-VIII
V	8	1,500	8-V
VII	10	400	10-VII
Rock, scattered timber X		<u>1,200</u>	Х
Approximate Land Area in Zone 2		11,500	

Two major wildfires of record have occurred in the East Fork of Rock Creek in Zone 2. The first occurred in 1919 (1,000 acres); the second was in 1939 (1,200 acres). It is believed that these were human caused.

There have been two smaller wildfires occurring in this zone since 1926. One of the fires was a Class A (.25 acres) and one was a Class B (.25 to 9.99 acres). Considering the effects of fire suppression, a conservative estimate is that one of the two fires showed growth potential, i.e., those that went to size Class B regardless of suppression activities. The Class B fire occurred in the zone in 1973.

Fire Behavior Estimate

About 74% of the forested area in this zone is in late successional stages and accumulated fuels are available for fire spread. Typical fuel loading is from 15 to 20 tons per acre. These fuels have been characterized by NFFL Fuel Model 10. Using weather records from the Philipsburg weather station in the BEHAVE program, an estimate of fire behavior characteristics is summarized in Table 9.

Table 9. Zone 2 - Cutaway Fire Behavior Estimates. Weather data was derived from the **PHILIPSBURG** fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and **FUEL MODEL 10**.

Levef ¹	A	В	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	39	54
Forward Rate-of-Spread (chains/hour)	6-8	7-9	8-10	9-12
Growth Rate (acres/hour)	1-2	1-2	2-3	3-5
Fireline Intensity (BTU/S/FT)	100-150	120-180	150-220	200-275
Crown Scorch ³ (feet)	15-25	20-30	20-40	30-45
Flame Length (feet)	3-5	3-6	4-7	5-8

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

The historical fire record and the extent of continuous fuels in this zone indicate that fires could reach maximum sizes of about 1,000 acres. In most cases, with the exception of the area around Hundred Acre Meadows and the extreme northeast corner of the wilderness east of Dry Creek, fires can be expected to burn upslope into sparse fuels at timberline and burn themselves out.

The ERC used for this zone would be as measured at the Philipsburg Fire Weather Station on a daily basis.

About 26% of the forested area is in Fuel Model 8. Of this about half is in 60 to 80 year old lodgepole pine that resulted from the 1919 and 1939 fires. These stands are relatively fire proof with very little fuels on the ground. The balance of Fuel Model 8 is in open Douglas-fir or subalpine fir at the higher elevations, with sparse undergrowth and a thin layer of ground fuels. Typical fuel loading was about 10 to 15 tons/acre. Fuel Model 8 areas should be evaluated as possible fuel breaks when predicting actual fire behavior and spread. A simulation of expected fire behavior in these fuels is illustrated in Table 10.

Table 10. Zone 2 - Cutaway Fire Behavior Estimates. Weather data was derived from the PHILIPSBURG fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 8.

Level	A	В	С	מ
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	39	54
Forward Rate-of-Spread (chains/hour)	1-3	1-4	2-5	2-5
Growth Rate (acres/hour)	.15	.15	.5-1	.5-1
Fireline Intensity (BTU/S/FT)	6-15	6-15	10-20	10-20
Crown Scorch ³ (feet)	1-2	1-2	1-3	1-3
Flame Length (feet)	1-2	1-2	1-3	2-3

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

Fire Effects

Fire Group 5: Fire Group Five occupies 1,500 acres in this zone and occurs primarily on the east side of Page Creek. Douglas-fir is the indicated climax species and dominates most seral communities at the lower elevations.

The role of fire in Group Five is not well defined. Fire probably occurred less frequently than it did in ponderosa pine habitat types or in the warmer Douglas-fir habitat types (Group Four). The relatively light fuel loads, sparse undergrowth, and generally open nature of the stands would appear to favor long fire-free intervals. However, Arno and Gruell (1983) estimate a mean fire interval of 35 to 40 years in presettlement stands in southwestern Montana.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Fire probably played an important role in favoring ponderosa pine on some sites. Without fire, ponderosa pine would be slowly replaced by Douglas-fir on these sites. Fire's role in seedbed preparation on most Group Five sites is confounded by the difficulty of regeneration to progress beyond the seedling stage on the droughty sites because of undergrowth and overstory competition. Where dense regeneration does occur, fire probably played a role as a thinning agent in sapling and pole-sized stands. Low to moderate intensity surface fire probably maintained many mature stands in an open, park-like condition. Many presettlement stands were actually scattered groves. Fire suppression has allowed these groves to become forest stands (Arno and Gruell, 1983).

Fuels are continuous at the lower elevations but thin out and give way to rock further upslope. However, a forested draw, leading into One Hundred Acre Meadow, provides a continuous fuel bed to the wilderness boundary.

Fire Group 6: Fire Group Six occupies 6,000 acres in this zone. Douglas-fir is the indicated climax with lodgepole pine as a major seral component. Whitebark pine is well represented on ridgetops and the head of drainages at the higher elevations. Fire Group Six stands are quite variable depending on site conditions, stand history, and successional stage.

The theoretical climax condition on Group Six sites is a multi-storied Douglas-fir stand, although a fire-maintained open forest condition was the normal situation during the presettlement period. Following a stand replacing fire grass, forbs, and shrubs dominate the site. Subsequent fires in this stage perpetuate grass, forbs, and shrubs. Douglas-fir seedlings become established on most sites in the absence of fire. Lodgepole pine may also become established or even dominate the seedling stage if a seed source is available or if lodgepole pine was present in the previous stand.

A fire in the seedling stage will return the site to grass, forbs, and shrubs. Similarly, a fire in the sapling and pole stage will revert the site to the herbaceous condition.

A high intensity fire in the pole stage will either revert the site to grass, forbs, and shrubs, or if serotinous cone bearing lodgepole pine are present, the fire will help establish a lodgepole pine stand. A low intensity fire in a large diameter pole stand or a small-sawtimber-sized stand would thin out Douglas-fir and leave an open, park-like stand.

The historical fire records show that stand replacement fires have occurred as evidenced by the 1919 and 1939 fires in this zone.

<u>Fire Group 7</u>: Fire Group Seven occupies 400 acres. This group is very limited in Zone 2. The same fire effects described in Zone 1 also appear here.

<u>Fire Group 8</u>: Fire Group Eight occupies 2,600 acres in this zone. These are the lower subalpine fir habitat types that are dominated by lodgepole pine and occur at lower elevations than the Group Eight stands found in Zone 1. Douglas-fir is present with lodgepole pine at the lower elevations.



Fire history data for Fire Group Eight habitat types east of the Continental Divide are lacking. Arno (1980) has, however, summarized available fire history data for lower subalpine forests from other parts of the Northern Rocky Mountains.

The occurrence of periodic low to moderate intensity fires favors Douglas-fir and lodgepole pine. Such fire set back invasion by the more tolerant spruce and subalpine fir, which, in the absence of fire, form dense understories and eventually take over the site. Fires of moderate intensity probably help Douglas-fir maintain a position of dominance or co-dominance with lodgepole in many Group Eight stands. The more fire resistant Douglas-fir has a better chance of surviving such fires and is able to successfully regenerate in fire-created openings where mineral soil has been exposed. Stand replacing fire will generally favor lodgepole pine on many of these sites. Some large, thick-barked Douglas-fir trees will often survive fires severe enough to kill all lodgepole pine trees, thereby assuring the presence of Douglas-fir in the new stand.

Fire frequencies for this group probably fall between those reported for Fire Group Seven lodgepole pine stands (about 50 years) and those identified for the more moist lower subalpine types of Fire Group Nine (90 to 130 years).

The theoretical climax forest on Fire Group Eight habitat types is either subalpine fir or spruce. Either climax situation requires a very long fire-free period to develop and is, consequently, rarely found. More common is a near climax situation characterized by a dense forest of subalpine fir and spruce, with abundant Douglas-fir, lodgepole pine, and often spruce in the overstory.

A stand replacing fire in the climax (or near climax) stage results in a shrub/herb stage followed by a seedling and sapling stage. On most Group Eight sites Douglas-fir, lodgepole pine, and, on some sites, spruce seedlings will dominate.

Any fire in the seedling/sapling stage will revert the site to shrubs and herbs. Pole-sized stands are usually mixed stands of Douglas-fir and lodgepole, except as previously indicated. A low to moderate intensity fire in such a stand will favor the more fire resistant Douglas-fir over the more fire susceptible lodgepole pine. A high intensity fire, however, will destroy the stand, thereby favoring the early serotinous cone producing lodgepole pine over Douglas-fir. Periodic fire could result in a fire-maintained lodgepole pine stand on some sites.

In the continued absence of fire, a mature stand will develop. Lodgepole pine and Douglas-fir will dominate the overstory, but a dense understory of spruce and subalpine fir is likely on many sites. A low intensity fire will remove much of this fire-susceptible understory and some of the lodgepole overstory, thereby favoring the Douglas-fir. A high intensity fire can destroy the stand and revert the site to shrubs and herbs. Again, the serotinous-coned lodgepole will have an advantage in regenerating itself in the new stand. Periodic fire could maintain a lodgepole stand on some sites. If fire is absent for very long, a near climax or climax forest will develop.

Fire Group 10: Rock and scattered timber occupy 1,200 acres in this zone. Fire effects described in Zone 1 are the same here.

Summary for Zone 2

We can expect a lightning caused wildfire with spread potential at least once every 50 years or so in this zone. The last such fire was in 1973. There is some potential, under extreme burning conditions, for a large acreage fire (1,000 acres) in the Dry Creek area. This fire will most likely spread rapidly upslope, torching out clumps of trees and the understory during favorable burning conditions. The majority of the fire activity will most likely be a surface fire spreading through understory vegetation. This same pattern can be expected in the East Fork of Rock Creek, except that the young lodgepole pine stands should dampen fire spread and maximum fire size may be less than 1,000 acres. The balance of the time, we can expect a lightning caused fire every 10 to 15 years that may burn a small group of trees, but would burn itself out at less than .25 acres.

The Philipsburg weather station was used to represent this zone. Refer to the probability estimates as described in the Zone 1 summary. The same probabilities for a fire ending weather event and a critical spread event are appropriate here.

2.2.3 Zone 3 - Northwest Slope

Description

Fire Management Zone 3 borders the northwest side of the wildemess on the Sula and Philipsburg Districts. It is on the west side of the Continental Divide. The lands are entirely National Forest status except for a patented claim in Section 3, T2N, R16W. A modern cabin exists on this site (see Chapter 3 for protection considerations). The fuel complex is similar to Zone 4, with relatively heavy and continuous fuels. It has been designated a separate Fire Management Zone because of its proximity to the wilderness boundary. The zone generally ranges from 7,000 to 8,000 feet with the exception of the lower Bitterroot River, which leaves the wilderness at about 5,000 feet. Topography is strongly dissected and steep. Slopes in the northeast half of the zone are generally 20 to 40% and in the southwest half generally greater than 40%. Several drainages run north out of the zone in the northeast half and generally west into the Bitterroot River in the southwest half of the zone.

Prevailing winds during the summer are generally westerly. This tends to promote local upslope and up canyon winds away from the wilderness boundary; however, strong variable local winds can occur from eddy effects caused by drainages lying at right angles to the prevailing winds. These winds, coupled with heavy fuels in the Carpp Creek drainage and west of Copper Creek, make these portions of the boundary the most vulnerable areas for fires to escape. The TeePee Point weather station records were used for the southwest portion of Zone 3 and Philipsburg weather station records for the northeast portion. For both stations, wind speeds taken at 2 p.m. (MDT) were seldorn greater than 10 mph. Both stations indicated winds occurring from 3 to 11 mph about 73% of the time. The aspects are quite variable within the zone. Average annual precipitation is from 30 to 40 inches.

Forest Plan allocations along Zone 3 are 55% primitive and semiprimitive dispersed recreation settings. About 45% is productive timber land. Timber harvest is evident with clearcuts adjacent to the boundary. Natural fuel loads tend to be high along the boundary.



Over 90% of the zone is forested, and fuel continuity is capable of supporting significant fire spread. The balance of the zone is in scattered timber, barren areas, or riparian zones where ignitions could occur but a lack of available fuel would prevent significant spread. The fuels in Zone 3 are categorized in Table 11.

Table 11. Zone 3 - Northwest Slope Acres by Fire Group and Fuel Model.

Fire Group	Fuel Model	Acres	Map Key
VI	10	13,200	10-VI
VI	8	5,200	8-VI
VIII	10	6,100	10-VIII
V	8	4,500	8-V
V	10	2,700	10-V
VII	10	4,100	10-VII
Rock, scattered timber, riparian X		4,600	Χ
Approximate Land Area in Zone 3		40,400	

Several large fires of record have occurred in Zone 3 - Northwest Slope: in the year 1896 (700 acres), in 1900 (2,000 acres), in 1905 (5,000 acres), and in 1919 (1,500 acres).

There have been 24 fires occurring in this zone since 1926. Twenty of these were lightning caused wildfires. This is an occurrence of about one lightning fire every three years. Eighteen of the lightning fires were Class A, one was Class B, and one was Class E. Three of the human caused wildfires were Class A and one was Class B. The smaller fire size since 1926 is undoubtedly due to fire suppression activities. The large fire record and the vegetation itself indicate a history of past larger fires. The largest fire in the Anaconda Pintler in the last 30 years was the Orphan Creek Fire. It was a lightning start on 8/26/81 and increased to 475 acres before it was declared out at the end of October. The fire was not readily accessible, was in steep rugged terrain with heavy fuels, and presented a risk to crews. Most of the burning occurred in the first 3 weeks despite some cloudy days with rain. The fire was suppressed with a contain strategy along the western edge near the edge of the wilderness. It was allowed to burn freely on the eastern front and burned into the wilderness. As with most fires, the burning pattern was mixed, leaving a vegetation mosaic on the landscape.

There have been three small wildland fire use projects in the zone.

Fire Behavior Estimate

About 73% of the forested area in the zone is in late successional stages and accumulated forest fuels are available for fire spread. Typical fuel loading ranges from 30 to 45 tons per acre. These fuels have been characterized by NFFL Fuel Model 10. Using weather records from TeePee Point and Philipsburg weather stations in the BEHAVE program, a simulation of expected fire behavior in these fuels is illustrated in Tables 12 and 13.



Table 12. Zone 3 - Northwest Slope Fire Behavior Estimates. Weather data was derived from the TEEPEE POINT fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 10.

Level	A	В	С	D
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	39	54+
Forward Rate-of-Spread (chains/hour)	7-9	7-9	8-11	10-12
Growth Rate (acres/hour)	1-2	1-3	2-4	2-5
Fireline Intensity (BTU/S/FT)	150-200	200-250	200-270	240-290
Crown Scorch ^a (feet)	20-30	20-30	20-40	24-45
Flame Length (feet)	3-6	3-6	3-6	4-7

¹ Energy Releasé Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

Table 13. Zone 3 - Northwest Slope Fire Behavior Estimates. Weather data was derived from the PHILIPSBURG fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 10.

Level ¹	A	В	С	D
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	39	54+
Forward Rate-of-Spread (chains/hour)	6-8	7-9	8-10	9-12
Growth Rate (acres/hour)	1-2	1-2	2-3	3-5
Fireline Intensity (BTU/S/FT)	100-150	120-180	150-220	200-275
Crown Scorch ^a (feet)	15-25	20-30	20-40	30-45
Flame Length (feet)	3-5	3-6	4-7	5-8

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

About 27% of the forested area is in Fuel Model 8. More than half of this area burned at the turn of the century and is now 70 to 80 year old lodgepole pine with light fuel loading. The balance of the area is in open Douglas-fir and ponderosa pine with sparse undergrowth. A simulation of expected fire behavior in these fuels is illustrated in Tables 14 and 15.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Table 14. Zone 3 - Northwest Slope Fire Behavior Estimates. Weather data was derived from the TEEPEE POINT fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 8.

Level	A	В	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	31	43	54	68+
Forward Rate-of-Spread (chains/hour)	2-3	2-3	2-4	2-5
Growth Rate (acres/hour)	.13	.13	.14	.15
Fireline Intensity (BTU/S/FT)	9-15	9-15	9-15	9-15
Crown Scorch ³ (feet)	1-3	1-3	1-3	1-3
Flame Length (feet)	1-2	1-2	1-2	1-2

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

Table 15. Zone 3 - Northwest Slope Fire Behavior Estimates. Weather data was derived from the PHILIPSBURG fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 8.

Level ¹	A	В	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	21	29	39	54+
Forward Rate-of-Spread (chains/hour)	1-3	1-4	2-5	2-5
Growth Rate (acres/hour)	.15	.15	.5-1	.5-1
Fireline Intensity (BTU/S/FT)	6-15	6-15	10-20	10-20
Crown Scorch ³ (feet)	1-2	1-2	1-3	1-3
Flame Length (feet)	1-2	1-2	1-3	2-3

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

These are areas that should be considered for natural fuel breaks when predicting actual fire behavior and spread.

Fire Effects

<u>Fire Group 5</u>: Fire Group Five sites occupy 7,000 acres in this zone. Douglas-fir is the indicated climax. Fire effects are the same as those discussed in Zone 2.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Fire Group 6: Fire Group Six occupies 18,400 acres in Zone 3. Douglas-fir and lodgepole pine dominate these sites. The tendency toward overstocking and the development of dense understories contribute to high fuel loads. Suppression mortality, snow breakage, blowdown, and insect and disease mortality operate at a high level in many stands. Fires often sit and smolder undetected in the duff until burning conditions become favorable for fire spread.

One of the Group Six sites that will support lodgepole pine as well as Douglas-fir succession in the absence of fire is similar to that described for Douglas-fir sites, except that lodgepole pine is usually a major component of seral stands. Fire-free succession progresses from the herbaceous stage to a mixed species seedling and sapling stage, a pole-sized tree stage, a young forest stage, the mature forest, and eventually the climax forest. Any fire in the seedling/sapling stage reverts the site to the herbaceous condition. High intensity fires have a similar result. Low intensity surface fires in young and mature forests have little effect on succession.

Moderate intensity fires favor the more fire-resistant Douglas-fir trees over the lodgepole pine and can result in an open, park-like Douglas-fir stand or Douglas-fir/lodgepole pine stand which will be maintained by subsequent fires.

A low to moderately intense fire in the mixed species pole stage can result in scattered Douglas-fir poles with abundant lodgepole pine regeneration, assuming that the burned lodgepole pine have serotinous cones. Lack of fuel would probably preclude a stand replacing fire in this stage, and a low intensity surface fire would probably have minimal impact. In the absence of fire, a lodgepole pine stand would develop beneath the scattered Douglas-fir overstory. Such a stand would be susceptible to destruction by a high intensity fire. A low to moderately intense fire could destroy the lodgepole pine understory and result in an open, park-like Douglas-fir stand. Subsequent fire would maintain this condition, but the lack of fire would allow a lodgepole pine and Douglas-fir understory to develop. Continued lack of fire would allow the development of a mature lodgepole pine stand with a Douglas-fir understory. Subsequent fire can result in a fire-maintained lodgepole pine stand, while lack of fire allows a mature Douglas-fir forest to develop.

Fire Group 7: Fire Group Seven occupies 4,000 acres in this zone. These are the cool habitat types dominated by lodgepole pine. Subalpine fir, spruce, Douglas-fir, and whitebark pine occur in varying amounts with lodgepole pine. Many mature stands are characterized by densely stocked, clean-boled trees with large amounts of deadfall on the forest floor from a mountain pine beetle epidemic in the late 1930's. In habitats below 7,500 feet, the role of fire in seral lodgepole pine forests is one that perpetuates it. Large accumulations of dead material caused by periodic beetle infestations result in high intensity fires.

Without periodic disturbances, the shade-tolerant species replace lodgepole because it does not regenerate well on duff or under shaded conditions. Fire interrupts the course of succession and increases the proportion of lodgepole with each burn. Within 50 to 100 years following a high intensity fire in a lodgepole-dominated stand, a reestablished lodgepole pine forest will exist even though shrubs and herbaceous cover may become dominant immediately following the burn.

Large stand replacing fires play a definite role in the ecology of lodgepole pine stands. The natural periodicity of fire in seral lodgepole stands probably ranges from less than 100 years to about 500 years (Hendrickson 1970). The interval between any two fires in one area might be only a few years (Brown



1975). Recurring low intensity fires may thin the stand or otherwise rejuvenate it without doing serious damage. Stands greater than 60 to 80 years old, however, become increasingly flammable due to overcrowding (suppression mortality), mountain pine beetle outbreaks, dwarf mistletoe infestations, and fire-killed timber (snags) from previous fires. In these areas a fire has the potential to impact thousands of acres. Vast tracts of lodgepole can develop in this way as the serotinous cones open and shower the burn with seeds. The Sleeping Child Burn on the Bitterroot National Forest in western Montana is an extreme example in modern times.

Examination of fire scars on slopes less than 35% shows periodic ground fires at 30-50 year intervals with stand replacement fires at 150-200 years. On slopes greater than 35% stand replacement fires occurred at 70-100 year intervals.

Following a stand replacing fire on a Group Seven site, a short-lived herb/shrub stage dominates. This stage is short-lived in the sense that lodgepole pine seedlings quickly become established and overtop the undergrowth. A fire in the herb/shrub stage will, however, extend its period of dominance. Recurring fire at frequent intervals could conceivably maintain the site in herbs and shrubs. A fire during the seedling/ sapling stage will also return the site to herbs and shrubs. The likelihood of a fire at this stage is not great on most Group Seven sites.

The effect of a fire during the pole stage will depend on fire intensity. A low intensity fire will thin the stand while a high intensity fire may replace the stand. Since pole-sized lodgepole pine usually contain serotinous cone crops, periodic fire at this stage can result in a fire-maintained lodgepole pine stand. The effect of the fire in a mature lodgepole forest is essentially the same as in the pole forest. A low intensity fire thins the stand and a high intensity fire recycles the stand. The probability of a stand replacing fire greatly increases as a previously unburned mature stand starts to break up and an understory of climax species develops. It is usually at this stage rather than the climax stage that fire recycles the stand.

<u>Fire Group 8</u>: Fire Group Eight occupies 6,000 acres in this zone; fire effects discussed under Zone 2 apply here.

<u>Fire Group 10</u>: Rock and scattered timber occupy 4,600 acres in this zone on the Continental Divide. Fire effects discussed under Zone 1 apply here.

Summary for Zone 3

Fire records indicate that we can expect a lightning caused fire once every six years and that 90 percent of the time it will be a low to moderate intensity surface fire. A high intensity fire may occur about 10 percent of the time. Fire behavior will most likely exhibit low to moderate rates of spread, occasional upslope runs that may replace portions of the stands, and scattered torching of individual or groups of trees. This will result in a natural vegetation mosaic.

Philipsburg and TeePee Point weather stations best represent this zone. Weather records for TeePee Point have only been kept since 1985. Statistically this amount of records will not generate valid probabilities. Due to this the Philipsburg station discussed in Zone 1 will be used to represent the probabilities of significant fire events occurring; please refer to Zone 1 summary for this discussion.

2.2.4 Zone 4 - Mystic

Description

Fire Management Zone 4 is the southwest portion of the wilderness straddling the Continental Divide generally below 8,000 feet. Most of the zone is forested. The highest elevation is about 9,000 feet on the Continental Divide next to Zone 1. The lowest elevations are at 6,000 feet where the drainages leave the zone. Slopes east of the Divide are generally 21 to 40%. West of the Divide they are generally more than 40% with the exception of the Park Lake area which is an alpine meadow/subalpine forest complex with less than 20% slopes. Drainages run southeast and northwest out of the zone making aspects mostly southwest and northeast.

The lands are entirely National Forest status. The Mystic Administrative Cabin is within this zone. Administrative responsibilities lie with the Sula District west of the Divide and with the Wisdom District east of the Divide.

The Continental Divide in this zone is more rounded and timbered than in Zone 1; therefore, the prevailing westerly winds usually create local upslope winds west of the Divide and downslope winds east of the Divide. With strong westerlies, however, eddies can create upslope winds at times east of the Divide. The TeePee Point weather station records were used for developing fire behavior estimates west of the Divide and the Wise River weather east of the Divide. Wind speeds were seldom greater than 10 mph at TeePee Point or Wise River. Average annual precipitation ranges from 30 to 50 inches.

Forest Plan allocation adjacent to the wilderness boundary in Zone 4 involves seasonal management areas. Forty percent of the area between Mussigbrod Lake and Pintler Creek is allocated to wildlife, 25% to noncommercial timber, and the remaining 25% to suitable timber. Mussigbrod Lake to Schultz Saddle is classified as "noncommercial", then grades downslope into suitable timber lands. Timber harvest has occurred throughout this management area. Fuel loading is heavy (> 50 tons/acre), in unharvested stands, from a mountain pine beetle epidemic in the late 1930's.

About 90% of the zone is forested with continuous timber types capable of supporting fire spread. The balance of the zone is in scattered timber or barren areas where ignitions could occur but a lack of available fuel would prevent significant spread. The fuels in Zone 4 are categorized in Table 16.

Table 16. Zone 4 - Mystic Acres by Fire Group and Fuel Model.

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Fire Group	Fuel Model	Acres	Map Key
VI	10	23,900	10-VI
VIII	10	5,100	10-VIII
VII	10	4,500	10-VII
V	8	500	8-V
Rock, scattered timber, barren X		<u>3,800</u>	Х
Approximate Land Area in Zone 4		37,800	

Several large fires of record occurred in Zone 4 since records have been kept: 1914 (700 acres), 1919 (2,500 acres), 1920 (200 acres), 1934 (300 acres and 100 acres).

There have been 57 fires occurring in this zone since 1926. Fifty-five of them were lightning caused wildfires. Two were human caused wildfires. This is an occurrence of about one lightning caused wildfire every year and a quarter. Thirty-four of the lightning fires were Class A (1/4 acre), eighteen were Class B (1/4 to 9.99 acres), and three were Class C (10 to 99.9 acres). One human caused fire was Class A and one was Class B. There have been no wildland fire use projects in this zone.

Considering the effect of fire suppression, a conservative estimate is that 22 of the 57 fires showed growth potential. These are the Class B and larger, for about 39%. Since lightning caused fires occur in the zone about once every year and a quarter, and of these, there is a 39% chance that the ignition will coincide with weather conditions conducive to fire spread, then at least once every fifth year we can expect a fire in Zone 4 with growth potential. The last Class B or larger fire in this zone was a 75 acre burn in 1974.

Fire Behavior Estimate

Over 98% of the forested area is in Fuel Model 10, typified by overmature stands with accumulations of litter and downed woody material. Typical loading is 30 to 35 tons per acre. Loading is heavier west of the Divide than east of the Divide.

Table 17. Zone 4 - Mystic Fire Behavior Estimates. Weather data was derived from the TEEPEE POINT fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 10.

Leveli	A	В	C	D
Percentile ²	20-50	50-80	80-95	95+
-	31	43	54	68+
Forward Rate-of-Spread (chains/hour)	7-9	7-9	8-11	10-12
Growth Rate (acres/hour)	1-2	1-3	2-4	2-5
Fireline Intensity (BTU/S/FT)	150-200	200-250	200-270	240-290
Crown Scorch ³ (feet)	20-30	20-30	20-40	24-45
Flame Length (feet)	3-6	3-6	3-6	4-7

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Table 18. Zone 4 - Mystic Fire Behavior Estimates. Weather data was derived from the **WISE RIVER** fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and **FUEL MODEL 10**.

Level	A	В	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	28	38	46	59+
Forward Rate-of-Spread (chains/hour)	6-9	9-11	10-12	10-14
Growth Rate (acres/hour)	.5-1	1-3	2-4	3-5
Fireline Intensity (BTU/S/FT)	100-180	175-230	250-300	225-325
Crown Scorch ³ (feet)	15-25	20-30	20-50	20-50
Flame Length (feet)	3-6	4-6	5-7	6-8

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

Fuel Model 8 is limited to a few small areas near Hope Lake and near the Bitterroot River. It makes up less than 2% of the continuous timber in this zone.

Fire Effects

<u>Fire Group 5</u>: Five Group Five stands occupy only 500 acres in this zone. These are the cool, dry Douglas-fir stands near the upper limits of this type. Regeneration is often difficult on these habitats. Undergrowth is sparse. This factor plus the usual open nature of the stands results in a low probability of a high intensity stand replacing fire. These stands will be maintained as open Douglas-fir stands with or without fire.

<u>Fire Group 6</u>: Fire Group Six occupies the largest area, 24,000 acres, in this zone. Lodgepole pine is the major seral species. Fuel conditions vary according to stand density and species composition. Fuel conditions in lodgepole pine stands tend to be less hazardous than in Douglas-fir stands. Ladder fuels in lodgepole pine are much less prevalent, so the probability of fire going from the forest floor to the crowns is not as great. The general fire effects described under Zone 2 apply here as well.

<u>Fire Group 7</u>: Fire Group Seven stands occupy 7,500 acres in this zone. This group of habitat types, mostly old growth subalpine fir and Englemann spruce, occupy the drainage bottoms and benches around Park Lake. General forest succession and fire effects are the same as those discussed for this group in Zone 3.

Fire Group 8: Fire Group Eight stands occupy 5,000 acres in this zone. Succession to subalpine fir is occurring under the lodgepole pine and contributes significantly to the overall fire hazard during dry conditions. The fire effects described for this group in Zone 2 are the same.

<u>Fire Group 10</u>: Rock and scattered timber occupy nearly 4,000 acres on ridgetop and upper cirque basins along the Continental Divide. Fire effects described for this group in Zone 1 apply here.

² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.

Summary for Zone 4

In Zone 4, we can expect an ignition with the potential for significant spread to occur about once every five years. It is uncertain just how great the chances are that a low to moderate intensity fire will grow to any significant size considering the predominance of old growth timber and flammable fuel in the zone. Chances seem greater that such a fire will burn a very small area, smolder under poor burning conditions for several days or months, then, when burning conditions improve, come to life with the potential for a high intensity fire.

Refer to the Zone 1 Summary for the discussion of the probability of significant fire events.

2.2.5 Zone 5 - Wise River

Description

Fire Management Zone 5 lies along the southeast boundary of the wilderness essentially on the Wise River District. There is a very small portion on the Wisdom District west of Pintler Creek. All of the zone lies east of the Continental Divide. The upper elevations are at about 8,000 feet and the lower elevations where drainages leave the zone are about 6,500 feet. Slopes vary considerably but are generally greater than 20%. Drainages generally run southeast out of the zone making aspects mostly southwest and northeast.

The lands are entirely in National Forest status. Structures in the zone are irrigation ditches in Palisade Creek and the Middle Fork of Fishtrap Creek.

In this zone prevailing winds are generally from the southwest down the Big Hole River. The northwest-southeast oriented drainages generally turn the winds upslope in the daytime hours. Down canyon winds are the norm at night. The Wise River weather station records were used for developing fire behavior estimates in this zone. Windspeeds were seldom greater than 10 mph at the Wise River station. Average annual precipitation ranges from 30 to 50 inches.

About 88% of the zone is forested with continuous timber types capable of supporting fire spread. The balance of the zone is in scattered timber, barren areas, or riparian zones where ignitions could occur but a lack of available fuel would prevent significant spread. The fuels in Zone 5 are categorized in Table 19.

Table 19. Zone 5 - Wise River Acres by Fire Group and Fuel Model.

Fire Group	Fuel Model	Acres	Map Key
VI	10	11,500	10-VI
VIII	10	3,700	10-VIII
VIII	8	1,200	8-VIII
VII	10	3,400	10-VII
V	8	3,000	8-V
Rock,scattered timber, barren, riparian X		<u>3,200</u>	X
Approximate Land Area in Zone 5		26,000	

There have been eight smaller fires occurring in this zone since 1926. Four of them were lightning cause wildfires and three were human caused wildfires. There has been one wildland fire use project, the East Fork of Fishtrap, in 1981 burning 125 acres.

Fire Behavior Estimate

About 82% of the forested area is in Fuel Model 10, typified by overmature stands with accumulations of litter and downed woody material. Typical loading is 20 to 30 tons per acre.

Table 20. Zone 5 - Wise River Fire Behavior Estimates. Weather data was derived from the WISE RIVER fire weather station. Fire behavior inputs included 4 mph mid-flame wind speed, 50% slope and FUEL MODEL 10.

Leveli	A	В	C	D
Percentile ²	20-50	50-80	80-95	95+
ERC	28	38	46	59+
Forward Rate-of-Spread (chains/hour)	6-9	9-11	10-12	10-14
Growth Rate (acres/hour)	.5-1	1-3	2-4	3-5
Fireline Intensity (BTU/S/FT)	100-150	175-230	250-300	225-325
Crown Scorch ³ (feet)	15-25	20-30	20-50	20-50
Flame Length (feet)	3-6	4-6	5-7	6-8

¹ Energy Release Component (ERC) percentile level selected to represent moderate (A), high (B), very high (C), and extreme (D) fire weather.

The extent of continuous fuels in this zone indicates that fires could reach sizes of about 1,000 acres or so before burning out at timberline. But, the narrowness and shape of this zone and the length of the wilderness boundary in this zone dictates that careful considerations be made in the burning plan prescription and pre-attack plan for the zone.

About 18% of the forested area is in Fuel Model 8. These are areas of more open Douglas-fir, subalpine fir, and whitebark pine with sparse undergrowth and a thin layer of ground fuels. Fires are low intensity with slow rates of spread.

Fire Effects

Fire Group 5: Fire Group Five sites occupy 3,000 acres in this zone. These open Douglas-fir habitat types are important in this zone because of their fuel break potential along the wilderness boundary. These types, along with rock slopes, isolate the areas of continuous timber to long north-south oriented drainages. The fire effects described under the other zone descriptions apply here.

Fire Group 6: Fire Group Six sites occupy 11,500 acres in this zone. These habitat types are dominated by lodgepole pine and are quite variable. They range from old growth lodgepole pine to doghair thickets.





² Percentile level selected from ERC frequency distribution graphs.

³ Based on selected daily fire weather records for each percentile level.



Fire effects will differ depending on stand conditions, but the general effects described under Zone 2 apply here.

<u>Fire Group 7</u>: Fire Group Seven sites occupy 3,400 acres in this zone. Succession on these sites has advanced to spruce and subalpine fir in the understory with patches of lodgepole in the overstory. Stand replacement fires may occur under dry, windy conditions. Such fires are limited to a brief period during the summer. Fire effects described in Zone 3 for this fire group are the same.

Fire Group 8: Fire Group Eight sites occupy 5,000 acres in this zone. Lodgepole pine, subalpine fir, and whitebark pine dominate these habitat types. The role of fire and fire effects described under Zone 3 apply here.

Fire Group 10: Fire Group Ten occupies over 3,000 acres near and at timberline. Fire is secondary to site factors as an influence on forest development on these sites. The cold, moist rocky fire resistant environment makes fires infrequent and severely limits their extent. The details described under Zone 1 fit this fire group across the entire wilderness.

Summary for Zone 5

Due to the isolation of continuous timber in this zone and the predominantly upslope winds, we can expect fires to burn out at timberline into Zone 1.

These fires will most generally be low intensity ground fires. Some torching of individual or groups of trees will occur. Short, upslope runs will also occur where the fuel conditions and topography will allow them.

Refer to the Zone 1 Summary for a discussion on the probability of significant fire events.

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CHAPTER 3 - CONSIDERATIONS FOR DECISION PROCESS

3.1 INTRODUCTION

This chapter discusses the general risks associated with a wildland fire use program in the A-P Wildemess and identifies forest improvements and structures, private inholdings and resources that may need to be protected. Specific protection considerations in the A-P Wildemess are listed for each Ranger District and for different resources and fire management concerns.

3.2 GENERAL RISKS

Implementation of a wildland fire use program has some inherent risks. Occasionally a wildland fire use project may burn beyond wildemess boundaries. This infrequent occurrence is most likely when an abnormal weather pattern or event takes place in conjunction with a large fire. On the other hand, suppressing all fires can set the stage for future problems by allowing forest fuels to build beyond natural levels. In the long run, fuel buildups because of suppression, infrequent fire, or few large fires will produce fires of higher intensity and larger size than a carefully monitored wildland fire use program.

The A-P Wilderness is a relatively small, narrow area along the Continental Divide. Its present size is just under 160,000 acres. Additions of various sizes are proposed. Even with additions, the A-P Wilderness will still require careful analysis to determine when and where the risk of a wildland fire use project can be accommodated.

Much of the wilderness is high elevation with discontinuous fuel. Areas along the wilderness boundary often have heavy fuels. So do many of the long drainages. Fire starts are most frequent on the southwest end of the wilderness. In general, winds are from the west; however, strong and erratic wind patterns can occur in the dissected drainages along the crest of the range. Generally, the Continental Divide runs southwest to northeast making the overall aspect northwest and southeast. Many of the large drainages are at right angles to the Divide. Prevailing winds tend to be cross drainage rather than with the drainage.

The five Fire Management Zones recognize the differences between areas. The risk assessment charts for each zone take into account the factors that would cause a fire to go out of prescription. Risk is also addressed in the "Go-No-Go" Decision Flow Chart, Wildland Fire Implementation Plan (WFIP), and through the Daily Revalidation process.

The ecological benefits of a wildland fire use program are complex and long term. In contrast, the social, economic, and political impacts of a natural fire program tend to be short term. Although public concern may arise during a wildland fire use project, there has been widespread support for the wildland fire use program.

A wildland fire use project could temporarily disrupt recreation activities, including outfitting and guide services. Outfitting is not a major use in the Anaconda Pintler. There are no base camps which would be impacted.

Fires are a primary, natural disturbance in the Anaconda Pintler Wildemess. Fire maintains the natural diversity and allows natural processes to take place. The importance of fire cannot be denied. The risk is better managed by allowing fire to occur in prescribed conditions than by attempting to suppress all fire.

3.3 PROTECTION CONSIDERATIONS

The intent of any applied fuel treatment measures would have the explicit objective of protecting identified private property, facilities, and those perimeter areas that are susceptible to a fire crossing them. Acceptable methods of fuel treatment that may be used to reduce the risk to these protected areas include:

Planned ignition and/or mechanical fuel manipulations outside of wildemess boundaries.

Planned ignitions inside boundaries where there is no feasible alternative to treat outside the wilderness boundary.

It is intended that these actions be planned and scheduled prior to a wildland fire use event. The objective of these actions is to increase the probability of success of the program and substantially reduce the threat of escape from the area or significant damage to capital investments.

Key perimeter areas that are susceptible to a fire crossing from inside the wildemess to outside must be identified. Topography, fuels characteristics, and historical records need to be evaluated by fire behavior and fuel management experts to determine where these vulnerable areas are located. The degree of vulnerability of these perimeter areas should also be determined on the basis of potential risk of escape. Examples may range from "no chance to defend" to "1 in 1,000 chance of fire escaping." Prioritization for dealing with these areas should be based on this assessment of risk probability. Some logical preventative measures are to modify the fuels characteristics within these areas to increase the probability of suppression actions being successful or to exclude the vulnerable areas by modifying the wildland fire use management unit boundary so that it is located in a more defensible location. This boundary could move either inside or outside the wilderness.

Actions planned to suppress a wildfire that threatens these vulnerable areas should be thought out. Those responsible for development of the individual wildland fire implementation plan must be careful not to exclude these identified vulnerable perimeters during the determination of the Maximum Manageable Area.

When protecting individual sites or facilities, other alternatives become available. Along with the possibility of physically modifying the fuels around these sites, some may be more appropriately protected by the use of heat reflective coverings and/or the judicious use of foams, sprinkler systems, and pumps. These techniques have proved to be very effective measures in protecting certain sites under low to moderate risk situations.

It is the responsibility of the wilderness coordinator to identify, prioritize, and schedule treatments for the areas that need to be protected or modified. The fire management staff will assist in this endeavor where fire behavior expertise is required and will have the responsibility of implementing any plans to be developed. Funding for treatments should be multi-functionally based.



3.3.1 Wisdom Ranger District

Forest Improvements and Structures

Mystic Cabin

Location: T1N, R16W, Section 2, Elevation 7,900', Mystic Lake

The long term objective for Mystic Cabin is to maintain it in a fashion that allows for its use by Forest Service employees on official business, protects it from deterioration, and presents the image of a building actively maintained and cared for by the Forest Service. Maintenance and rehabilitation will be done in a fashion that meets the standards of management for a historic structure eligible for listing under the National Register of Historic Places.

Fire prevention activities, such as cutting overhanging limbs and removing debris from the cabin roof, will be conducted as needed to prevent human caused fires.

In the event of a wildfire or wildland fire use project in the vicinity of the cabin, measures will be taken to protect the cabin from fire. Advance measures to "fire proof" the cabin through major vegetation manipulation will not be undertaken.

Bender Cabin

Location: T1N, R17W, Section 28, Elevation 8,000'

In the event of a wildfire or wildland fire use project in the vicinity of the cabin, measures will be taken to protect the cabin from fire. Advance measures to "fire proof" the cabin through major vegetation manipulation will not be undertaken.

Inholdings

There are no inholdings within the A-P Wildemess on the Wisdom Ranger District.

3.3.2 Pintler Ranger District

Forest Improvements and Structures

The Pintler District has numerous trail bridges and puncheons that would be very costly to replace if they were destroyed by fire. Protection of these structures with gravity sock sprinklers, fire shelters, and other minimum impact strategies would be appropriate. Major vegetation modification measures should not be taken.

Page Creek Bridge (36 foot bridge)

Location: Page Creek Trail #39 approximately .4 miles toward Page Lake from its junction with the East Fork Trail #3

East Fork Bridge (36 foot bridge)

Location: East Fork Trail #38 approximately 3.5 miles from the East Fork Trailhead

Queener Basin Puncheon (160 foot puncheon)

Location: Continental Divide Trail #9 approximately 6.8 miles from the East Fork Trailhead

Beaverhead Puncheon #1 (3 puncheons totaling 155 feet)

Location: Hi-line Trail #111 approximately .5 miles toward Beaverhead Pass from its junction with the Carpp Creek Trail #24

Beaverhead Puncheon #2 (2 puncheons totaling 106 feet)

Location: Hi-line Trail #111 approximately 1 mile toward Beaverhead Pass from its junction with the Carpp Creek Trail #24

Carpp Creek Bridge (35 foot bridge)

Location: connecting trail from the Carpp Creek Trailhead to the Carpp Creek Trail #24 where it crosses Carpp Creek

Carpp Lake Puncheon (90 foot puncheon)

Location: Carpp Lake Trail #110 approximately 2.5 miles toward Carpp Lake from the Carpp Creek Trailhead

Tamarack Creek Bridge (45 foot bridge)

Location: Hi-line Trail #111 approximately 700 feet toward Carpp Lake from its junction with the Glover Basin Trail #171

Glover Basin Puncheon (70 foot puncheon)

Location: Hi-Line Trail #111 approximately .2 miles toward Porter Ridge from its junction with the Tamarack Lake Trail #4

Edith Lake Puncheon (108 foot puncheon)

Location: Edith Lake Trail #97 approximately .5 miles toward Edith Lake from its junction with the Hi-line Trail #111

Middle Fork Bridge (40 foot bridge)

Location: Falls Fork Trail #29 where the trail crosses the Middle Fork of Rock Creek

Falls Fork Puncheon (2 puncheons totaling 150 feet)

Location: Falls Fork Trail #29 approximately .75 miles toward Johnson Lake from the Middle Fork Trailhead

Falls Fork Bridge (60 foot bridge)

Location: Falls Fork Trail #29 where it crosses the Falls Fork of Rock Creek approximately 2 miles toward Johnson Lake from the Middle Fork Trailhead

Johnson Lake Inlet Puncheons (2 puncheons totaling 60 feet)

Location: connecting trail between the Continental Divide Trail #9 and the Hi-line Trail #111 at the inlet to Johnson Lake

Middle Fork Bridge and Puncheons (1 bridge and puncheon)

Location: approximately on the first 1/2 mile of the Middle Fork Trail #28 after it crosses the Middle Fork of Rock Creek

Inholdings

<u>Clipper Lode Mine, Survey #10579, Mineral Entry #073448 (Weaver's Patented Mining Claim and Cabin)</u>

Location: 20 acres at the head end of Copper Creek, T2N, R16W, SE1/4 Section 3, Elevation 7,800'

Fires which threaten this land or cabin will be suppressed.

Pintler District Ranger discussed the protection needs in the vicinity of this claim with owner, Jim Weaver. Mr. Weaver is aware of wildland fire use policy. He does not want fuel breaks created as advance protection measures along the borders of the claim, nor does he have a problem with "a comer" of the claim burning. He does want the cabin protected.

The claim lies at the top of the Copper Creek drainage near Forest Service Trail #26. The drainage is heavily timbered. The area around the claim is primarily old growth spruce and subalpine fir. This north aspect tends to be damp with numerous seeps. The clearing which surrounds the cabin would not carry fire readily. The one room cabin is made of dimension timber, milled on site. It has a steel roof. There is a creek nearby which could provide a pump chance.

Patented Mining Claim

Location: approximately 20 acres, T4N, R14W, Section 28, Elevation 8,200'

This claim has no structures and has had no activity for years. It is near the top of peak 8,285. Area is primarily rock. Likelihood of fire is very small; however, private land is under State protection and fires will be suppressed.

North of Continental Divide, T4N, R13W, Sections 32 and 33, fall under State protection and fires will be suppressed.

3.3.3 Sula and Wise River Ranger Districts

No protection needs for structures, improvements or inholdings have been identified.

3.4 THREATENED, ENDANGERED, AND SENSITIVE SPECIES

There are no threatened or endangered plant species known to occur in the Anaconda Pintler Wilderness. However, several U.S. Forest Service listed sensitive plant species do occur within the wilderness. Forest Service policy mandates that management decisions "must not result in the loss of species viability or create significant trends toward Federal listing for populations of sensitive plant species (FSM 2670)". The natural reintroduction of fire in the Anaconda Pintler Wilderness is likely to benefit plant species whose roots are adapted to a regular fire regime, as well as annual species with soil scarification requirements.

The extent to which any sensitive plant species and their habitats have been impacted by past fire suppression activities is not known. It is probable that more suitable habitat existed prior to suppression activities, in which case continued fire suppression would only lead to more fuel loading in these fire adapted habitats. This could increase the risk of a stand replacing fire event in habitats where more frequent, low intensity fires historically occurred. A stand replacing fire would be more prone to injuring plant root crowns, thereby preventing new growth of sensitive plant species. It may be necessary to monitor wildland fire use in areas with known occurrences of sensitive plants to determine whether some type of action is needed to protect these populations.

A GIS layer containing sensitive plant locations is available for planning purposes. The Forest Botanist, Ecologist or Sensitive Plant Coordinator should be contacted when a wildland fire use project is being planned to determine whether mitigation will be needed to protect plant populations.



3.5 NOXIOUS WEEDS

A growing concern among botanists and ecologists has been the influx of noxious weed populations in areas where fire historically occurred. Species such as spotted knapweed (*Centaurea maculosa*) and sulfur cinquefoil (*Potentilla recta*) have become major components of the grassland and open ponderosa pine habitats in westem Montana. The Anaconda Pintler Wildemess has fortunately had only minor problems with spotted knapweed.

Spotted knapweed prefers the warm, dry ponderosa pine and Douglas-fir habitat types which historically burned at an interval of 5 to 25 years. As noted above, fire suppression activities have increased fuel loadings and the potential for a high intensity fire event in these areas. Although there is little scientific evidence of the impacts of burning on spotted knapweed spread, a recent review points to some anecdotal evidence that underburning on a site where knapweed currently exists will cause it to increase (Rice and Sacco 1995). Low intensity burns usually don't kill individual knapweed plants because of their deep tap roots and are usually not hot enough to kill seeds buried in the soil. However, high intensity burns would cause more disturbance and bare soil than under historical conditions, and a greater likelihood of knapweed colonization from off-site. For this reason it would be important to monitor sites where spotted knapweed has been known to occur (e.g. Kurtz Flats) in the event a wildfire strikes and is allowed to burn naturally. This also emphasizes the importance of using weed seed free hay for livestock and keeping boots and camping gear free of knapweed seed when entering the Anaconda Pintler Wildemess.

3.6 PROPOSED NATURAL RESEARCH AREAS

Establishment records have been completed for two proposed Research Natural Areas (RNAs) in the Anaconda Pintler Wildemess: Goat Flat and East Fork Bitterroot RNAs. A decision notice establishing these two RNAs will be signed in Fiscal Year 2000. Maps showing the location of the RNAs are located in Appendix A. The appropriate resource specialist(s) should be included on the analysis team for any wildland fire use project that may involve one of the RNAs.

The Goat Flat RNA is located in the Anaconda Pintler Range of southwestern Montana along the Continental Divide 14 miles southwest of Anaconda, Montana. Total area of the RNA is 1,376 acres. A segment of the RNA, approximately 679 acres, lies within the Anaconda Pintler Wilderness. The remaining 697 acres of non-wilderness land within the RNA consist of reserved federal lands. The Goat Flat RNA consists of alpine communities and subalpine fir on sedimentary and igneous rock. It contains a wide variety of upper subalpine and alpine plant communities with nearly 190 species represented including Species of Special Concern and five listed as sensitive within Region 1 of the Forest Service.

The East Fork Bitterroot RNA is located in the southeastern portion of the Bitterroot National Forest on the Sula Ranger District and is entirely within the Anaconda Pintler Wilderness. The central features are beaver dams and ponds and riparian communities dominated by various willows and sedges. The RNA includes a wilderness segment of the East Fork of the Bitterroot River. The size of the RNA is 298 acres; approximately 125 acres or 43% of the RNA supports beaver ponds and willow-sedge communities.



It is possible we may face situations where fuel loadings in one component of the landscape mosaic are now, or will be, set up to influence adjacent landscape elements in ways that would not have occurred naturally.

Once these Research Natural Areas are designated, they need to be included on all maps used when determining actual natural fire prescriptions. This will ensure that RNAs are not forgotten, and that minimum impact will indeed occur.

If a fire occurs in an RNA, the Forest RNA Coordinator and the Regional RNA Coordinator need to be notified. This will help facilitate opportunities to conduct followup monitoring work within the RNAs.

3.7 HERITAGE RESOURCES

The Anaconda Pintler Wilderness has a number of prehistoric and historic heritage resources. Very few of these heritage resources have been formally inventoried and evaluated for National Register of Historic Places eligibility.

Wildfire is not seen as a significant threat to surface visible prehistoric archeological sites. Wildfire may thermally alter lithic material, causing it to resemble culturally heat-treated archeological artifacts. However, surface sites lack the archeological context necessary to determine if archeological lithic material was purposefully heat treated by prehistoric people, or thermally altered as the result of previous wildfires burning over the site.

Historic sites, especially those with standing structural remains, are vulnerable to having any significant cultural or historic values associated with them destroyed by wildfire. In order to determine what significant heritage values may be at risk from wildfire, a systematic inventory for heritage resources was begun in fiscal year 1993.

If archeological/historic inventory, and consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation, determine that other management action is appropriate, then we will change our management strategy.

We have consulted with the Salish Kootenai Culture Committee and elders. They are comfortable with returning natural fire to the wilderness and have not identified sites which need protection. They indicated, in a very general sense, that parts of the Anaconda Pintler were historically used for travelways, gathering, and spiritual purposes. No specifics of historic use or current use were mentioned.

3.8 SMOKE

The impact of smoke on airsheds will be evaluated in making the initial recommendation. If the local airshed coordinator feels the potential smoke load is too great, it may be necessary to take action to reduce the amount of smoke generated.



All smoke management decisions will be made in accordance with the Montana State Airshed Group Operative Plan. The number of fires burning, location, elevation, extent, duration of smoke, atmospheric conditions, and public sentiment are some factors which would influence the decision. Forecasted smoke dispersal predictions will aid in making smoke management decisions. The Montana Air Quality Bureau monitors the weather closely in the fall to advise of inversions.

If smoke threatens communities, the State Air Quality Bureau will be contacted. The Bureau will be kept informed on an ongoing basis. They will then advise residents of potential health threats.

Section 118 of the Clean Air Act (USC 7401-7626) states that each officer, agent, or employee of the Federal Government must comply with Federal, State, interstate, and local requirements concerning control and abatement of air pollutants to the same extent as any other person. Smoke generated by fires in the wilderness may spread into adjacent airsheds and into smoke sensitive areas. When action is taken on prescribed fires for control of smoke, a large portion of the control efforts will be concentrated on the smoldering edges.

In the fall, valleys are prone to inversion layers which trap smoke. Lower elevation wildemess fires will contribute more to this problem than high elevations fires. During this season, elevation will be a major factor that influences smoke management conditions. Fall, more than any other season, is the time when problems are likely to occur because of stagnant air. These conditions can also impair the ability to detect and suppress wildfires, or adversely impact the slash burning programs of agencies and private companies.

Butte is a "non-attainment" area for air quality purposes; however, smoke disperses well in summer months. Attainment problems are generally in fall and winter. In the case of a large fire, there could also be smoke impacts in summer months.

The magnitude of smoke will vary from visible smoke within the wildemess boundary to smoke haze persisting for several days over downwind valleys. Smoke may impact Anaconda and Butte airsheds and to a lesser degree Georgetown Lake, Philipsburg, Wisdom, and Wise River. Ash and sediment could temporarily impact water quality.

3.9 FIRE STARTS OUTSIDE THE WILDERNESS AND BURNS INTO THE WILDERNESS

Historically some of the fires in the Anaconda Pintler, particularly on the Beaverhead side, came in from outside the boundary. Current policy is clear. If a fire begins outside wildemess, it is a wildfire and must be suppressed. If it burns into the wilderness from outside, it is still a wildfire and cannot be designated a wildland fire use project.

3.10 ECONOMIC EFFICIENCY

Part of the process in determining the appropriate management response to a wildland fire includes an economic analysis that incorporates fire fighter and public safety, resource objectives and social values. Implementation of a fire suppression action or a wildland fire use project should be economically viable based on the values to be protected, costs, and land and resource management objectives.



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CHAPTER 4 - OPERATIONS/PROCEDURES

4.1 INTRODUCTION

This chapter along with the referenced appendices contains all the necessary information to implement a wildland fire use project through the development of a Wildland Fire Implementation Plan (WFIP). A preseason exercise will be conducted every year in May or June to review the process.

Federal Wildland Fire Management Policy requires a WFIP be initiated for all wildland fires. The WFIP consists of three stages: (1) Initial Fire Assessment, (2) Short-term Implementation Actions, and (3) Long-term Assessment and Implementation Actions. The level of completion is dependent on the management strategies (i.e. fires managed for resource benefits will have 2 - 3 stages completed while some fires that receive a suppression response may only have a portion of Stage I completed). The following pages describe in detail the processes and steps for a wildland fire use project in the Anaconda Pintler Wilderness. Table 21 contains a summary of the stages for implementing a wildland fire use project. A more detailed description of each stage of the process is described in Sections 4.2 - 4.5.

Table 21. Summary of WFIP Implementation, Decision Authorities, and Time Frames.

WFIP Stages	Decision Authority	Planning and Assessment Element	Maximum Completion Timeframe
WFIP Stage I: Initial Fire Assessment	District Ranger	Report Fire to Responsible District Dispatch Air Observer Fire Situation Decision Criteria Checklist (Initial Go/No Go Decision) Recommended Response Action Assign a Fire Use Manager (FUMA) as needed	2 hours after fire detection
WFIP Stage II: Short- term Implementation Action	District Ranger ¹	Identify Wildland Fire Use Analysis Team Short-term Fire Behavior Prediction and Risk Assessment Short-term Implementation Actions Complexity Analysis Stage III Need Assessment Chart	24 hours after Stage I completion or as expected fire behavior indicates (rate of spread, flame length, size)
WFIP Stage III: Long- term Implementation Action	District Ranger ¹ Forest Supervisor	Maximum Manageable Area Definition Fire Behavior Predictions Long-term Risk Assessment Long-term Implementation Actions	As Periodic Fire Assessment indicates the need
Periodic Fire Assessment	District Ranger	Part 1: Revalidation Part 2: Stage III Need Assessment Chart	On assigned frequency
Wildland Fire Situation A	analysis (WFSA)		Before implementing new strategy

¹The Forest Supervisor has the decision authority for wildland fire use projects that involve more than one ranger district's jurisdiction.



The Wildland Fire Management Policy Implementation Reference Guide contains a thorough description of the process for preparing a WFIP. Forest Service Manual 5140 Fire Use and 2320 Wilderness Management should be referenced for policies and processes specific to the Forest Service and Northem Region. Copies of all the required forms with instructions for completing a WFIP are located in Appendix C. The forms are also available in computer software program (WFSA Plus). Other forms that are not part of the WFIP, but may still need to be filled out during a wildland fire use project are also located in Appendix C. These additional forms include the Wildland Fire Use Observation Record, Wildland Fire Use Evaluation, and a form for collecting information for the State of the Wilderness (SOW). The information on the SOW form is similar to that used to complete the Decision Criteria, but is formatted to facilitate inclusion into the SOW report. The line officer may choose to use the supplemental information from the Fire Information for SOW Report form to determine issues that may preclude wildland fire use.

Forest Service Manual (FSM) Chapter 5140 - Fire Use, states that the decision authority and responsibility for approving a wildland fire implementation plan (WFIP) belongs to the Forest Supervisor. This authority may be delegated to a District Ranger, but only if the District Ranger has the prerequisite knowledge, experience, and staff available. The Northem Region FSM 5140 Supplement contains more specific direction regarding delegation of authority and prerequisite knowledge and experience. Direction pertaining to wildland fire use at the national and regional level is subject to change and should be reviewed prior to each fire season. Appendix D contains the letters with the delegations of authority from the Forest Supervisors. These letters will be updated annually or as needed when changes in personnel and policy occur.

4.2 STAGE I: INITIAL FIRE ASSESSMENT

Decision Authority: District Ranger

Maximum completion timeframe: 2 hours after confirmation of fire start

Stage I is the Initial Fire Assessment. This is the preliminary stage of the WFIP and establishes documentation groundwork for further stages. It is both an information gathering stage and decision making stage. This information provides location, fire cause, administrative information, fuel conditions, weather, and fire behavior situation: it is documented using the Fire Situation, Initial Go/No-Go Decision Criteria Checklist, and Recommended Response Action forms.

Federal Wildland Fire Policy requires Stage I completion within 2 hours after fire confirmation. The time of detection on the fire detection report (FSM 5182, form R1-5120-28), if confirmed, establishes the start point of the two-hour decision window. A copy of the detection report will be included with the Initial Fire Assessment documentation. Time constraints on the initial fire assessment are imperative so an appropriate range of management responses remain available to the fire manager.



4.2.1 - Fire Situation

The information needed for this step comes directly from the initial fire assessment or size-up. This information will be recorded on the Fire Situation form and can be transferred, as needed, to later planning stages or to the Wildland Fire Situation Analysis (WFSA).

4.2.2 - Decision Criteria Checklist (Initial Go/No-Go Decision)

The Decision Criteria Checklist provides the agency administrator/line officer with standard decision elements to determine if the current wildland fire meets criteria to be managed as a wildland fire use project. These decision elements assess threats from the fire, potential effects of the fire, risk from the fire, and effects of other fire activity on management capability; they also allow the agency administrator to evaluate other, possibly unforeseen or unanticipated issues.

To complete the checklist, the agency administrator evaluates the criteria, based on staff input, and determines the appropriate management response. A "Yes" response to any of the decision elements indicates that management should consider a suppression-oriented management response. All "No" answers to the decision elements indicate that the fire is a viable wildland fire use project candidate.

Detailed explanations of the decision elements follow:

• Is there a threat to life, property, or resources that cannot be mitigated?

Does the current fire have a high probability of impacting inholdings, permitted facilities, or administrative sites or structures?

Protection of human life is reaffirmed as the first priority in wildland fire management. Protection of property and natural and cultural resources is secondary to firefighter and public safety (U. S. Departments of Interior and Agriculture 1995). In the event that resources are committed to a wildland fire, safety of the personnel becomes the first priority for management of that fire.

Outfitter itineraries provide Forest Service personnel the means to furnish ample warning for the protection of life and property under forecast conditions. Indications that camps are occupied can be monitored by routine air patrol, and contacts can be made by wilderness rangers.

General areas where an ignition may pose a threat to property under specified conditions have been identified on the fire plan map. In response to the interagency fire policy review, structure protection will be based on estimates of suppression costs commensurate with values to be protected (U. S. Departments of Interior and Agriculture 1995). Site protection plans provide specific guidance regarding structure defensibility under various conditions and describe resource and equipment needs to protect structures. Included are reasonable cost estimates to implement these plans. Document mitigating factors (e.g. wet season, late in season, Normalized Difference Vegetation Index (NDVI) greenness, fuel loading and arrangement) which support wildland fire use for resource benefit in the risk zones.



Forest Service officials shall avoid giving the agency the appearance of being prepared to serve as a structure fire suppression organization (FSM 5138.2). Forest Service personnel shall limit structural fire suppression actions to structure protection (FSM 5138.3).

- Are potential effects on cultural or natural resources outside the range of acceptable effects? This decision element relates to the objectives found in Chapter 1 and resource concerns in Chapter 3. Potential outcomes will be closely related to burning conditions and fire behavior. Identify RNAs, cultural sites or other resources within the immediate fire area. Refer to the RNA descriptions in Chapter 3 for specific fire management direction. If the ignition is outside designated wildemess, fully discuss the fire and land management objectives of the area. This discussion should address the cost plus net value change of allowing wildland fire use in this area. If the projections indicate possible impact to historic sites, refer to Site Protection Plans (Appendix C) and evaluation worksheets for specific objectives and level of fire protection needed for their protection. Refer to suppression guidelines for anadromous habitat if holding actions are anticipated.
- Are relative risk indicators and/or risk assessment results unacceptable to the appropriate Agency Administrator? Is there a threat to the boundary? What is the fire potential?

 This decision element involves risk assessment for the fire. Since the decision to suppress or manage the fire is time constrained (2 hour decision space), it is not possible to determine a long-term assessment of risk such as the Rare Event Risk Assessment Process (RERAP). In lieu of the quantitative long-term risk assessment, there are two qualitative assessment processes available for use. The first consists of Risk Assessment Charts (Appendix C) that have been developed for each of the fire management zones in the Anaconda Pintler Fire Management Unit (FMU). These charts use fire danger adjective ratings that are based on Energy Release Components (ERCs) for an assigned weather station for each zone and time of the year to determine the risk. The fire management zones were based on the following characteristics or conditions:
 - Wilderness management objectives/constraints
 - Successional stages or vegetative conditions
 Orientation of drainages in relation to prevailing winds
 - Proximity of barriers or boundaries to prevailing winds
 - Downslope winds east of the Continental Divide
 - Values at risk outside boundary

The second qualitative risk assessment process that may be in conjunction with the Anaconda Pintler FMU Risk Assessment Charts is the Wildland Fire Relative Risk Rating chart that is presented in the Implementation Procedures Reference Guide to the Federal Wildland and Prescribed Fire Management Policy as an alternative relative fire risk rating process. The Wildland Fire Relative Risk Rating Chart is included in Appendix C.

These qualitative analyses help examine the risk of a fire crossing the Anaconda Pintler FMU boundary and weigh climatological and fuels data to determine fire potential. To complete this assessment, it will be most efficient to fill in the Threat to Boundary and Fire Potential sections of the Fire Information Form for the SOW report.





Additional Risk Indicators to Consider

Determine the value for the current day's ERC for Fuel Model G with the weather station which best represents conditions at the fire location. Compare the value against the climatology for the representative station. Also determine the values for the all-weather average, for the 80th percentile value, and for the Keetch-Byram Drought Indices (KBDI) of the current day. Compare the relationship between the current year-to-date trend and the current day's ERC with the curves (1993 - wet year and 1994 - dry year, 80th percentile, and all-weather average) which have been plotted for reference.

If the ignition occurs within an elevated risk zone, document circumstances (e.g. wet season, late in season, Normalized Difference Vegetation Index (NDVI) greenness, fuel loading and arrangement) which might mitigate the threat to the boundary and preclude the need to initiate appropriate management response. Should the initial analysis determine that the fire is a wildland fire use candidate, the added risk within the shaded zones might justify consultation with the next higher level of authority regarding the wildland fire use recommendation. For further discussion and information regarding risk zones, fire behavior estimates, energy release components, and weather see Chapter 2 and Appendix B.

If a new ignition falls within an existing Maximum Manageable Area (MMA) and the implementation plan analysis documented no new starts be allowed to burn within this MMA, the appropriate management response will be initiated on the new ignition.

Is there other proximate fire activity that limits or precludes successful management of this fire?

Do concurrent wildland fires on the Forest, in the region, or nationally make it probable that management and holding forces are or will not be available to manage the fire?

National preparedness levels IV and V no longer preclude the ability to consider or manage a wildland fire use project; however, consultation with regional level agency representatives at level IV and national level representatives at level V must occur prior to decision. The goal is to permit individual unit fire management plans to operate while still acknowledging the importance of each decision on the national situation (FFALC 1995). The process for wildland fire use implementation at national or regional preparedness level IV or V is outlined in the National Interagency Mobilization Guide, Chapter 26.3.5.

Once an ignition is declared a wildland fire use project, it is considered on an equal basis with concurrent wildland fire activity for allocation of resources. When multiple ignitions occur but cannot all be managed for wildland fire use, prioritization due to fire regime type or other consideration should be documented on the Decision Criteria Checklist.

Are there other Agency Administrator issues that preclude wildland fire use?

This decision element allows agency administrator/line officer discretion when making the decision to manage as a wildland fire use project.

Once the Decision Criteria Checklist is complete, managers can determine the appropriate management response. At the bottom of the Decision Criteria Checklist is a check box for the recommended management response (suppress or manage as a wildland fire use project) followed by the agency administrator's (or other delegated individual's) signature and date. This will complete the Initial Assessment.

4.3 - STAGE II: SHORT-TERM IMPLEMENTATION ACTIONS

Decision Authority: District Ranger

Maximum completion timeframe: 24 hours after Stage I completion
or as expected fire behavior indicates (rate of spread, flame length, size)

The WFIP, Stage II, Short-term Implementation Actions, represents the initiation of management for resource benefits. It includes validation of short-term implementation actions as a decision. This stage provides predictions of where the fire may go, how intense it may burn, and how fast it may spread. Several questions are answered during this stage: What are the necessary short-term management actions? What is the full complexity? The need to move directly to the long-term management actions (Stage III) section is also evaluated. Although this stage is generally completed within 24 hours of Stage I, it may be acceptable to defer completion of Stage II in cases where the current and expected fire behavior and growth is expected to be minimal.

4.3.1 - Identify Wilderness Fire Analysis Team

A Wilderness Fire Analysis Team will need to be formulated for Stage II. If local qualified team members are unavailable, positions may be filled through Dispatch on a resource order. The managing unit may want to consider ordering a Wildland Fire Use Team to manage the fire and to prepare the WFIP for Stages II and III. The team configuration is displayed in Table 22.

Table 22. Wilderness Fire Analysis Team Positions.

Position	Function
Fire Use Manager (FUMA)*	Implements the WFIP and may be involved in the development of all or part of the WFIP. Determines the organization and expertise necessary to successfully manage the wildland fire. Manages the organization assigned to the fire and assesses fire behavior and size for consistency with WFIP objectives and constraints. May conduct Periodic Fire Assessment.
Wildemess Specialist	Describes impacts on wilderness resource for different scenarios.
Fire Behavior Analyst (FBAN or LTAN)*	Predicts extent and intensity of fire and develops maps for fire area under expected weather conditions and for experienced severe weather conditions.
Resource Advisor(s)	Describes impacts to given resources, e.g., fish, water, soil, cultural, air quality, etc.
Public Affairs Specialist	Provides timely and accurate information to the public.

^{*}Must be included on all Wildemess Fire Analysis Teams



4.3.2 - Fire Behavior Predictions and Risk Assessment

Short-term fire behavior predictions are generated through the Fire Behavior Prediction System using the BEHAVE software to obtain predictions of fire intensity and rate of spread based on fuel model, wind, topography, and fuel moisture conditions. These predictions are important because they provide the following supportive information:

Estimates of fire size and shape at a given time

Models of management alternatives

Determination of resource needs, production rates, and requirements

Placement of resources

Estimates of behavior under different weather conditions

Estimates of fire intensity and duration inputs for First Order Fire Effects

Models for contingency action planning

Developing prescriptions through historical weather records

Opportunities to calibrate and improve future predictions

Risk assessment may be quickly made for this stage by again referring to one of the two methods described in the risk assessment section of Stage I. Appendix B should also be consulted, as there is an array of graphs that display historical weather data and ERC values for different weather stations. If the unit has the capability to complete full long-term risk assessments using RERAP and Fire Area Simulator (FARSITE), it is strongly encouraged to begin assessment in preparation for Stage III.

4.3.3 - Short-term Implementation Actions

The Short-term Implementation Action form will be completed to describe what the immediate implementation actions will be. These actions can vary significantly, depending upon the specific circumstances of the particular fire. In cases where the fire may be fuel-limited, surrounded by sparse fuels or natural barriers with only limited spread potential, monitoring may be specified as the necessary implementation action. In other cases, monitoring plus some form of limited mitigation actions may be necessary. Conversely, fuel types in which the fire is burning may require immediate actions to delay, check, or direct the spread of fire.

In describing the Short-term Implementation Actions, the following action items will be considered:

- Objectives and desired effects
- Safety considerations
- External concerns
- Environmental concerns
- Threats
- Estimated costs

The Short-term Implementation Action form is found in Appendix C.



4.3.4 - Complexity Analysis

The Wildland Fire and Prescribed Fire Complexity Analysis has been developed to evaluate the overall complexity of specific fires. This analysis incorporates an assigned numeric complexity value for specific complexity elements that are weighted in their contribution to overall complexity. The weighted value is multiplied by the numeric value to provide a total element rating. The total values are added to generate the summed complexity numeric value. Breakpoint values are provided for low, moderate, and high complexity.

Complexity elements that have been established include:

- Safety
- Threats to boundaries
- Fuels and fire behavior
- Objectives
- Management organization
 Improvements to be protected
- Natural, cultural, and social values to be protected
- · Air quality values to be protected
- Logistics
- Political concerns
- Tactical concerns
- Interagency coordination

The form used to complete the above analysis (Wildland and Prescribed Fire Complexity Rating Worksheet) and a supplemental guide to facilitate determination of numeric values are located in Appendix C.

4.3.5 - Stage III Need Assessment Chart

The assessment chart provides the agency administrator and staff with an aid to determine if the Stage III, Long-term Assessment and Implementation Actions, need to be developed, documented, and implemented immediately, or if the fire can be managed through the established short-term implementation actions until indicated otherwise by the Periodic Fire Assessment. For many wildland fires, fuel continuity and spread potential will be low. In other situations, environmental conditions will preclude active burning and spread. For instances such as these, immediate completion of Stage III of the WFIP will not need to occur until specific thresholds are reached. These thresholds are assessed subjectively on this chart or through the continued tracking provided by the Periodic Fire Assessment (see Periodic Fire Assessment section).

The following Stage III Need Assessment Chart will help agency administrators prioritize planning needs for multiple fires and ensure that those having the greatest need will receive the necessary planning in response to management capability and time constraints. To complete the assessment, local fire managers evaluate the criteria and determine if the fire warrants completion of the long-term implementation actions (Stage III) at this time or if Stage II implementation directions are adequate. If Stage II actions continue, the Periodic Fire Assessment will determine if and when Stage III will be initiated.

The chart evaluates the following variables:

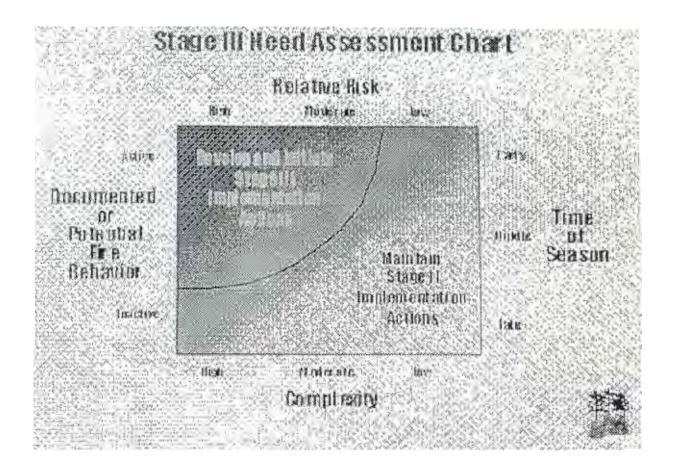
Complexity - determined from the Wildland and Prescribed Fire Complexity Rating, including
the review of objectives and type of fire behavior required to achieve those objectives (i.e., low
intensity, surface fire, high intensity, stand replacement burning, etc.).



should be completed immediately. Past observations of local fire behavior can be used to identify when specific fuel types exhibit a transition between benign and severe fire behavior. The factors contributing to this transition become important determinants of risk associated with this fuel type. For example, fuel types where fire occurs infrequently but at high intensities, factors of drought, high Energy Release Components (ERCs), low relative humidities, high temperature, and high winds combine to result in sustained high intensity crown fire activity. The importance of this information lies in the identification of the current point in time and its proximity to the fire behavior transition point. Where the affected administrative unit is temporally in relation to this threshold is a critical consideration determining the level of WFIP planning and implementation to be done. The closer to this point, the greater the need to prepare WFIP Stage III.

Relative risk - can be determined from the Wildland Fire Relative Risk Rating Chart (this chart is used in Stage I and is located in Appendix C) or from long-term risk assessment procedures such as RERAP or FARSITE.

 Fire Behavior - determined from short-term and long-term fire behavior predictions and forecasts.



4.4 - STAGE III: LONG-TERM ASSESSMENT AND IMPLEMENTATION ACTIONS

Decision Authority: Forest Supervisor

Maximum completion timeframe: Within 24 hours after Stage II

or as Periodic Fire Assessment indicates need

This stage represents completion of long-term implementation actions necessary to successfully accomplish the desired objectives. The WFIP has been progressively developed throughout all stages. This represents the final stage. It presents tactical implementation information and will be attached to information developed in previous stages.

This stage will define the Maximum Manageable Area (MMA), the geographic area in which the fire will be allowed to burn. It will consider long-term fire behavior predictions and risk assessment. It will assess the probability of the fire reaching the MMA perimeter, and it will document those operational management actions necessary to manage long duration fires that will need mitigating measures to strengthen and defend the MMA.

Stage III, as presented in the standard format (Stage III: Long-term Implementation Actions form) outlined in Appendix C, consists of the information shown below:

Objectives and Risk Assessment Considerations

- * Natural and cultural resource objectives and constraints/considerations
- MMA Definition and Maps

Fire Projections and Maps

Weather Season/Drought Discussion and Prognosis

- Long-term Risk Assessment
- Probability of Success
- Threats
 - * Threats to MMA
 - * Threats to public use and firefighter safety
 - * Smoke dispersion and effects
 - * Other
- Monitoring Actions
- Holding Actions

Resources Needed to Manage the Fire

- Estimated Costs of Long-term Implementation Actions
- Contingency Actions
- Information Plan





- Post-Bum Evaluation
- · Signatures and Date

Completion of this stage is triggered by indications from Need Assessment Chart, Stage II, WFIP, or through the Periodic Fire Assessment, Part 2. Once Stage III has been completed, the WFIP is completely developed.

4.4.1 - MMA Decision Authority

As previously stated, decision authority to approve wildland fire use for resource benefit lies with the Forest Supervisor, but may be delegated to a District Ranger and delegated Acting District Ranger where appropriate. In order to ensure management oversight, the districts will forward copies of approved WFIPs to the Fire Staff at the Supervisor's Office, who in turn forwards copies of the plans to the Regional Fire Use Specialist.

MMAs that cross administrative boundaries require approval from all the affected units. The following outlines the necessary approval authority:

 MMAs exclusively on one Ranger District: Forest Supervisor or delegated District Ranger have wildland fire use approval authority (Delegation of Authority Letters, Appendix D).

MMAs on two Ranger Districts of the same forest: Forest Supervisor or as delegated in the Delegation of Authority Letter (Appendix D). The District where the wildland fire use project originated will be responsible for management, unless otherwise agreed upon in writing.

MMAs on two or more forests: Each Forest Supervisor or as delegated in the Delegation of Authority Letters (Appendix D). The district recommending the wildland fire use approval shall take the lead in developing the WFIP, with input from the other affected districts. The lead district will be responsible for management of the fire unless otherwise agreed to in writing.

4.4.2 - MMA Determination

The appropriate management response strategies where the WFIP planning has progressed to Stage III will have a defined MMA. This will ensure a clear and common understanding of the authorized size and location of the fire among agency administrators and cooperators.

The MMA delineates the geographic area within which the fire will be allowed to burn. It provides for closely directed wildland fire use in a specific area defined by resource objectives, fire and weather prescription elements, social needs, political considerations, and management capability.



MMAs will be governed by the following rules:

- They will be based on predetermined MMAs or be developed as part of WFIP, Stage III.
 They will be fixed and not subject to change once established and approved by the agency administrator.
 - They will serve as a definition of firm limits of management capability to accommodate the social, political, and resource impacts for all wildland fire managed for resource benefits or other management considerations.
- If a new ignition falls within an existing Maximum Manageable Area (MMA) and the implementation plan analysis documented no new starts be allowed to burn within this MMA, the appropriate management response will be initiated on the new ignition.

Note - the Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide provides the following direction: The complex nature of fires and land management precludes the ability of managers to write a set of guidelines or directions that cover all the potential situations. Past experiences and recognition of potential future situations require the following consideration regarding the rigid nature of drawing lines on a map.

There may be isolated cases where formal implementation of the Wildland Fire Situation Analysis (WFSA) process is not prudent or logical because a wildland fire exceeded the MMA. In these situations, experience may indicate that the MMA will be exceeded by the wildland fire on a very small or nonthreatening scale. Management options in this situation include:

Constraining the fire spread to the small or non-threatening overrun of the original acceptable area using the available holding forces, and identified in the WFIP, Stage II or III. This must be accomplished within two burning periods.

In the case of relatively long-range spotting, treat an isolated spot generated by this natural process as a separate fire. Determine the appropriate management response for this new ignition separately from the original wildland fire, based on criteria specific to the new ignition.

If the agency administrator and FUMA determine that the fire cannot continue to be managed within the original approved boundary, a WFSA will be utilized to analyze new strategic and tactical alternatives and to select an appropriate management response

4.4.3 - Long-term Risk Assessment

Decision making associated with managing wildland fire for resource benefits may have critical impacts. It is important to ensure informed and reasoned decisions. The importance of risk assessment is reinforced through the Guiding Principles from the Federal Wildland Fire Policy and Program Review (USDI/USDA 1995) recommendations that state, "Sound risk management is a foundation for all fire management activities," and "Fire management plans are based on the best available science."

An array of decision making support aids are available to address and assess wildland and prescribed fire risk. These technological tools are appropriate when a specific tool can clarify the uncertainty, reduce the







risk of undesirable outcomes, and facilitate a reasoned decision. Reference Appendix B for information to assist in long-term assessment.

The choice of technique will depend on the information needed and the state of knowledge regarding the subject area. Techniques may range from a subjective, descriptive comparison to a very objective, in-depth analysis using sophisticated models.

Specific assessment products useful in evaluating risk include:

- · Probability of the fire reaching the MMA perimeter
- Probability of a season-ending weather event
- Indications of where the fire may spread, or total area that may be burned by the fire
- How fast the fire will spread
- How soon the fire may reach critical sites or the MMA perimeter
- Predictions of fire intensity and severity
 Fuel conditions, moisture conditions, departure from average conditions
- Fire dynamics indicators of potential rapid escalation in fire behavior
- Analysis of fire behavior indicators, comparison with 10 years' statistics
- Fire history reviews, records of past fires in terms of area burned and type of fires (i.e. low-moderate intensity, surface fire, stand replacement, etc.)
- Predictions of the range of potential fire effects on natural and cultural resources
- Probability of adverse smoke effects and dispersal

There are no mandatory requirements for risk assessment. However, an assessment must be completed that yields the above information ensuring an informed decision making process. Units are encouraged to acquire and utilize available long-term risk assessment techniques, such as the Rare Event Risk Assessment Process (RERAP) and the Fire Area Simulator (FARSITE). As the quality of risk assessment increases, the quality of subsequent decisions and probability of achieving the desirable outcomes increases. Units should strive for an informed and reasoned decision making process.

4.5 - PERIODIC FIRE ASSESSMENT

Decision Authority: District Ranger or Designated Acting Maximum completion timeframe: based on assigned frequency

This provides a process to evaluate the continued capability of the local unit to manage the fire for resource benefits and determine if the fire is escalating in complexity and/or operational needs. If complexity and operational needs are escalating, the assessment indicates the need to fully define an MMA, develop long-term fire behavior predictions, conduct long-term risk assessment procedures, and define detailed long-term implementation actions (WFIP, Stage III). If the assessment indicates inadequate resource capability to manage the wildland fire use project, this may be a trigger point to develop a WFSA.



This assessment is completed as frequently as specified by the local unit (depending on fire activity and predicted weather conditions) but no longer than every 1-5 days in shrub/timber types and daily in grass

fuel types. Active wildland fire use projects require daily assessment, whereas inactive fires may be assessed less frequently. Active status is defined as a burning period in which fire perimeter growth is expected to increase by 10 percent or 10 acres, whichever is less. Inactive status is any burning period where this does not occur (FSM 5142, R1 Supplement 1991).

When multiple fires are being assessed daily, additive effects of all fires must be considered along with assessment of each individual fire. Management oversight during the Periodic Fire Assessment phase is maintained through dialogue with SO and RO staff regarding resource availability and by forwarding copies of updated assessments and projections to the next higher level.

4.5.1 - Decision Authority.

A Periodic Fire Assessment record is kept with each WFIP and is signed by the approving line officer or designee. The decision authority for the Periodic Fire Assessment belongs to each Forest Supervisor. This responsibility can be delegated to an Acting Forest Supervisor or District Ranger. This authority may also be delegated in writing to an acting line officer, a deputy or assistant line officer, a primary staff individual with fire credentials, or the assigned fire use manager (FUMA).

In the event that the MMA crosses administrative boundaries, for efficiency of coordination, a single line officer or designee will be appointed as the responsible official for signing the Periodic Fire Assessment. This should be determined through consultation and documented in the development of the WFIP, Stage III.

The Periodic Fire Assessment consists of three components:

- Part 1: Revalidation Checklist
- Part 2: Stage III Need Assessment Chart
 - Part 3: Signature Table

4.5.2 - Part 1: Revalidation Checklist

The Revalidation Checklist consists of the same decision elements present in the Decision Criteria Checklist. At this point in the implementation process, it is necessary to periodically review management capability. In order to accomplish this, an additional decision element has been added, "Do expected management needs for this fire exceed known capabilities?"

During Part 1, the local fire manager or FUMA will review and complete the assessment checklist. Once this form is completed, it does not have to be redone, but it must be reviewed and documented on the signature table. The local unit must note the valid dates and the frequency of the assessment on the form. The "Valid Dates" include those dates where the assessment remains valid, as indicated by the dated signature. When any decision elements change from a "No" to a "Yes", a new checklist must be completed for documentation purposes. The assessment frequency is how often the assessment will be reviewed. This frequency can be daily, but if the unit desires, it can be less frequent.







When completing Part 1 of the checklist, a "Yes" answer to one or more of the decision elements indicates inability to continue management of the fire within defined limits of the current response. This triggers preparation of the WFSA to guide selection of a different appropriate suppression response alternative.

4.5.3 - Part 2: Stage III Need Assessment

Part 2, the Stage III Need Assessment, is a process that validates the level of implementation actions. It must be completed periodically for all wildland fires managed for resource benefits where Stage III has not yet been completed. This portion of the Periodic Fire Assessment utilizes the Stage III Need Assessment Chart (see Stage II chapter of this guidebook). If the chart indicates that WFIP Stage III is needed, it must be prepared within 24 hours.

4.5.3 - Part 3: Signature Table

Once completed, this assessment will be periodically reviewed for validity. The signature table provides documentation for this process.

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5.1 INTRODUCTION

Effective communication is an important component of any wildland fire use program. This section identifies when, with whom, and how communication needs are met.

Communication falls into broad categories based on time frames. 1) Pre-season planning and review is necessary internally and with other agencies. 2) In the event of a prescribed fire numerous contacts are necessary. Contacting landowners with nearby properties is a priority for District Rangers. Keeping other agencies informed, especially when there is an ongoing fire, is also critical. 3) A ongoing public education effort, emphasizing the role of natural fire, increases program success. Fire outbreaks in the wilderness or elsewhere on the two forests provide an opportunity to share the natural fire message. Information needs to include the effects of fire suppression for the last 80 years. Concepts to focus on are: 1) Fire is an important ecological factor for habitat types of the Northern Rockies. 2) Increased, unnatural, fuel loading will lead to larger, higher intensity fires. 3) Wilderness fire is inevitable--it is not a question of "if", it's a question of "when".

Appendix E contains a list of phone numbers for agencies, permittees and private landowners that may need to be contacted in the event of a wildland fire in the Anaconda Pintler Wilderness.

5.2 INTER/INTRA AGENCY COORDINATION

5.2.1 - Preseason Planning and Review

Assure coordination in wildland fire use program. The following agencies should be involved.

Federal Agencies

- All Forests and Districts Involved with the A-P Wilderness
- Fish and Wildlife Service
- BLM
- NPS, Big Hole Battlefield National Monument

Montana Agencies

- Fish, Wildlife and Parks
- Department of State Lands
- Air Quality Bureau

City/County Governments

Local Airshed Coordinators



5.2.2 - In the Event of a Wildland Fire

As appropriate, keep the following agencies informed of fire status. This is especially critical if the fire has the potential to spread into the protection jurisdiction of another agency or if there are concerns, such as smoke, which impact downwind communities.

Federal Agencies

- All National Forest Supervisor and Ranger District offices in the A-P Wildemess including line officers, PAOs and dispatch offices
- Federal Aviation Administration
- Fish and Wildlife Service
- Bureau of Land Management

Montana State Agencies

- Air Quality Bureau
- Department of State Lands, Local Land Office and/or Unit
- · Fish, Wildlife and Parks, Regional Headquarters
- Department of Commerce, Aeronautics Division
- Highway Department/Highway Patrol

City/County Governments

- Local Airshed Coordinator
- County Board of Commissioners
- County Sheriff
 City/County Health Department, Air Pollution Control Officer

5.2.3 - For Fires Projected to Cross National Forest Administrative Boundaries

Evaluate each fire with potential to cross administrative boundaries with a Wilderness Fire Analysis Team of designated representatives from all units involved. Evaluation will be for each individual fire.

Our objective is to allow wildland fire to burn across administrative boundaries when within the Maximum Manageable Area contained in the Wildland Fire Implementation Plan. The Maximum Manageable Area is established once, during preparation of the plan, and does not change.

Dispatchers on the two Forests will develop a procedure to keep each other informed of the status of each wildland fire. Coordination of aerial overflights will be part of this procedure.



5.2.4 - Coordination in the Event of Multiple Starts

In the event of multiple starts throughout the wilderness, it is important that close coordination take place.

If there are multiple starts in the Anaconda Pintler it is very likely that the Selway Bitterroot and Frank Church River of No Return Wildemesses will have many starts also.

Bitterroot Dispatch and the Zone Beaverhead/Deerlodge Dispatch will need to stay in close contact regarding fire status and new starts.

If the situation becomes sufficiently complex a Wilderness Fire Coordinating Group will be formed. This group will be responsible for gathering and disseminating wilderness fire information, internally, and assisting the Forests and Region in establishing the status of new fire starts. This coordination group will be implemented by the Region or by a Forest if the situation warrants. The authority of the group will come from the Forest Supervisor(s) through the lead Forest, determined at the time of activation, by considering such factors as: current fire complexity, critical social, political, or economic considerations. As a minimum the organization will include the following:

- Wildemess Fire Coordinator/Manager
- Wildemess Resource Advisor assigned by the involved Forest(s)

The group must include at least one member from each involved Forest. Other specialists such as a Fire Behavior Analyst and other resource specialists should be considered.

The Wilderness Fire Coordinator/Manager must be familiar with the wilderness fire management direction and be a fully qualified Fire Use Manager. The Resource Advisor must be familiar with fire, the wilderness fire management program, and preferably have knowledge of the Anaconda Pintler.

5.3 - INFORM AND INVOLVE ACTIONS

The following "Inform and Involve" plan will guide wildland fire information efforts within the Anaconda Pintler Wilderness. Agency and public action items are identified in one of the following four categories.

5.3.1 - Fire Planning and Revisions: These activities address fire plan as well as general awareness of the wildland fire use program.

Action Item	Tools	Responsibility	When
Notify public and other agencies of plan revisions.	Information Letter	Forest Supervisor, Fire Review Task Force	Upon completion of review
Notify media of plan revisions.	News Release	Forest Supervisor, Fire Review Task Force	Upon completion of review
3. Present plan revisions to Forests/Districts.	Family Meetings	Forest Rec/Fire Staffs, Forest PAO, District Resource Asst., FMO	Upon completion of review
Increase understanding of wilderness objectives, wildland fire use, and fire ecology. Target employees.	Brochures, Videos, Training, Family Meetings, Field Trips	Region Office PAO and A&FM, Forest Supervisor	Ongoing
 Increase understanding of wilderness objectives, wildland fire use, and fire ecology. Target the public. 	Brochures, Videos, Posters, Field Tours	Regional Office PAO and A&FM, Forest Supervisors	Ongoing
Increase understanding of wilderness objectives, wildland fire use, and fire ecology. Target elected officials.	Briefing Paper, Field Tours, Phone	Regional Office PAO and A&FM, Forest Supervisor	Ongoing
7. Increase understanding of wilderness objectives, prescribed natural fire, and fire ecology. Target the media.	Field Tours, News Releases	Regional PAO and A&FM, Forest Supervisor	Ongoing

5.3.2 - Preseason Activities: These activities prepare the A-P Steering Group for the upcoming fire season.

Action Item	Tools	Responsibility	When
Review procedures for restricting areas and trails during a fire.	Meeting	A-P Steering Group	Winter/Spring A-P Coordination Meeting
2. Maintain contact with outfitters, permittees, and private in-holders affected by wilderness fire. Develop a plan that provides direction in the event fire threatens improvements.	Meeting, Phone	District Rangers	By May of each year
3. Maintain a contact list of potentially affected outfitters, permittees and private landowners and other agencies within and immediately adjacent to the wildemess.	Meeting, Phone	District Rangers	By May of each year
 Prepare a packet for outfitters that explains the wildland fire use program so that they can communicate this information to their clients. 	Information Packet	Wilderness Coordinator	By May of each year
Prepare annual preseason news article on wilderness fire policy/ecology.	News Release	Supervisor's Office IO and A&FM	By June of each year
 Present wilderness fire policy and procedures to permanent/seasonal employees. 	Forest/District Orientation	Forest Rec/Fire Staffs, District Resource Assistant, FMO	By field season of each year
7. Post "wildemess fire" information signs at appropriate trailheads.	Posters, Signs	District Rangers	As needed



5.5.5 - Wildiand Fire Ose III Frogress.	CATALON COMPANION CONTRACTOR CONT	***************************************	MARKET TO THE PARTY OF THE PART
Action Item	Tools	Responsibility	When
Brief appropriate Line Officer(s) on fire status.	Meeting, Phone, Briefing Paper, Computer Updates	Fire Use Manager, Wilderness Fire Analysis Team	When fire starts, daily, and significant changes occur
Post "fire caution" signs at appropriate trailheads. Coordinate with all A-P Districts.	Posters, Signs	District Rangers, Wilderness Coordinators	When a wildland fire use is burning in the area
 Determine the need for fire closure. Coordinate with affected and/or adjoining Forests, agencies, landowners, and permittees. 	Meeting, Phone	Regional Forester, Forest Supervisor, Fire Use Manager, District Rangers	Determined by current and expected fire status
Post "fire closure" signs at appropriate trailheads. Coordinate throughout the A-P. Inform permittees, public and the media.	Posters, Signs, Phone	District Rangers, Wilderness Coordinator	When closure is put into effect for area, trail, and/or road
 Establish a public information organization, as appropriate, and commit organization to support of fire(s) until no longer needed. 	Support Organization	Forest Supervisor, District Rangers	Determined by current and expected fire status
6. Brief interested and affected parties (outfitters, permittees, and private landowners and other agencies) on wildland fire use project status. Implement the plan of action identified preseason, if appropriate.	Meeting, Phone, Field Tour, Weekly Newsletter, Letter to the Public A-P Mailing List	Forest Supervisor, Fire Use Manager, District Rangers	When fire starts and significant changes occur
 Keep wilderness rangers, trail crews, and receptionists informed about wildland fire use project status. 	Meeting, Field Tour, Briefing Paper, Computer Updates	Forest Supervisor, Fire Use Manager, District Rangers	When fire starts and significant changes occur
Brief the appropriate elected officials and their staff on wildland fire use project status.	Meeting, Field Tour, Phone, Briefing Paper	Forest Supervisor, Fire Use Manager	When fire starts and changes occur
 Keep the media informed of wildland fire use project status. Note: All Forest-level news releases will require Forest Supervisor and/or District Ranger approval. 	Interview, Field Tour, Phone, Meeting, News Release	Forest Supervisor, Fire Use Manager, PAOs	When fire starts and significant changes occur
10. Brief the general public on wildland fire use project status. Note: All Forest-level news releases will require Forest Supervisor and/or District Ranger approval.	Media, Weekly Newsletter, Community Bulletin Boards	Forest Supervisor, Fire Use Manager, District Rangers, PAOs	When fire starts and significant changes occur
11. Document fire ecology/effects for future training courses and/or presentations.	Photos, Slides, Videos, Fixed Plots	Fire Use Manager, District Rangers, Wilderness Advisors and Research	Ongoing

5.3.4 - Post-Season Activities: These activities provide for follow-up.

Action Item	Tools	Responsibility	When
Review past season's information effort.	Meeting	PAOs, Wilderness Coordinator	Fall/Winter A-P Coordination Meeting
 Consider follow-up contacts with other agencies, affected outfitters, permittees, and private landowners contacted during the past season's fires. 	Meeting, Phone	District Rangers	Within 3 months of the end of the season
Prepare article on the past season's fire activity.	News Release, Letter to the Public A-P Mailing List	Regional Office PAO and A&FM, Forest Supervisor	By November of each year, if appropriate

5.3.5 - Additional Tools

Fire Education in General

School Outreach: Designate and train fire education people from both forests.

Meet with local teachers to find out their needs for fire-related

educational materials and programs (a "Fire Box"?).

Provide teachers with packets of materials including: "Fire in the Mountains, Fire in the Mind," a FS-NPS teacher's guide, Fire: the Story Behind a Force of Nature, "Fire's Role in Nature" (a poster), a video on fire in wilderness or the A-P Wilderness specifically, the map of the A-P

Wildemess, lesson plans developed with local teachers.

Tours of Old Burns: Identify easily reached burns for feature stories by news reporters

and public field trips for citizen's groups and school groups. Orphan

Creek or Sula R.D. is ideal. It is also near the historic McCart Lookout.

We should look for an opportunity to put in a fire interpretive trail Interpretive Trails:

> near the A-P Wilderness, where we can explain the role fire plays and why we treat fire differently in and out of wilderness. Such a site, while not in the A-P Wildemess itself, could be where press and VIP tours are conducted, where participants don't have time for a longer trip into

the A-P Wildemess.

Possible sites include: the Gibbon Fire, near Hogan Cabin; McCart

Lookout: and the Barker Creek Fire.

Present the plans for managing fire in the A-P Wildemess to all-employee Employee Briefings:

gatherings at both Forest's S.O.'s and at the affected district offices.

Issue "feature story" news releases as the opportunity arises. Include the Feature Stories:

Northern Region News in the list of news outlets receiving the stories.



PAO Education: Conduct the two forests' Public Affairs Officers on a trip into the

wilderness to gather still and video photographs and make them familiar

with A-P Wilderness geography.

Exhibits: Put together a "before-during-and-after" exhibit for use at malls,

fairs, and professional society meetings. Include animated video showing

changing landscapes and the role fire plays.

Highway Signs/Radio: Prepare mobile highway signs explaining that a fire is burning and

telling motorists to tune their car radios to AM 1610 for more information. Include funding for remotely programmable radio transmitters and for a mobile fire interpretive specialist in future

budgets.

A-P Wildemess Map: Include a message about fire (and weeds) in the next printing of

the A-P Wildemess Map.

"Urban Interface": As development near the A-P Wilderness and the two forests increases,

we need to become more aggressive in educating landowners of

their responsibilities on nearby lands.

Fire Season Activities

Fires: Fires in the A-P Wildemess present an opportunity to tell our special

story. Prepare sound-bite messages for incident commanders, line officers, and fire information officers to use when reporting on fires in the wildemess. Give these messages and this plan to any

fire information organization set up for a large incident.

Internal Briefings: Brief Regional Office and Supervisors Offices staff on plans for

the coming year.

Press Briefings: Brief news reporters in May or June (before fire season, after the

fire plan is in place) to acquaint them with our plans, the language of fire

fighting, and how they can get access to A-P Wildemess fires and

information about them.

Hold briefings in Butte, Dillon, Hamilton, and Philipsburg.

Smoke Briefings: Hold community briefings in affected downwind towns and cities

during fires.

Landowner Briefings: Keep adjacent landowners up to date on current fires through

personal contacts by line officers.



Video: Use existing footage plus footage shot in the A-P Wildemess at an A-P

fire to produce a 10-minute program about fire and its role in the A-P Wilderness. Use the video for presentations to civic groups and upper

elementary and high school students.

Press Access: This needs special attention. Remote fires will not get much

attention and so won't offer us a chance to explain our special messages if reporters can't get to them. We need to provide

special aircraft time for press overflights and for fire information officers

to take pool footage and photographs.



CHAPTER 6 - MONITORING, EVALUATION AND DOCUMENTATION

6.1 INTRODUCTION

Monitoring and evaluation are important at several phases of the wildland fire use program. These phases are: 1) Ongoing (during the fire), 2) Post-Fire (mostly within six months), and 3) Programmatic. Guidelines describing when and what will be monitored are provided in this chapter.

6.2 ONGOING

Any ongoing wildland fire will be monitored. Fire size chronology, management actions (e.g. flights, holding actions, closures), and expenditures are all categories of information that must be tracked. Monitoring will be done with the Periodic Assessment form as well as the SOW Report form, Wildland Fire Use Observation Record, and other WFIP forms. All these forms and others are located in Appendix C. This information will be used for local/regional data base development. It will be filled out during the fire by the FUMA or other members of the fire. If multiple fires occur, it is important to document each separately. Such items as visibility impairment, days of trail closure, etc., should be noted.

A primary reason for monitoring is to check predicted expectations.

6.3 POST-FIRE

Immediately after a fire, the Wildland Fire Use Evaluation form identifies items that need to be captured on all fires size Class B and above. In some cases, it might also be helpful to fill out this form for Class A fires. This would be indicated if there were problems with process or if special circumstances relating to ecological or social concerns (e.g. Threatened and Endangered Species or concentrated public use) were present.

This information for the Wildland Fire data base would be collected on District or Forest within six months of the fire. The wild Fire Manager and Resource Advisor at a minimum need to be involved. For fires over 50 acres, an onsite interdisciplinary review will be conducted. This review would collect the following information:

Fire Intensity Mapping (with Photo Corroboration)

- Fire Area (Acres)
- · Crown fire, % of Acres
- Lethal underburn, % of Acres
- Non-lethal underburn, % of Acres
- Un-burned area within fire perimeter, % of Acres
- Indicate vegetation or habitat type and fuel model

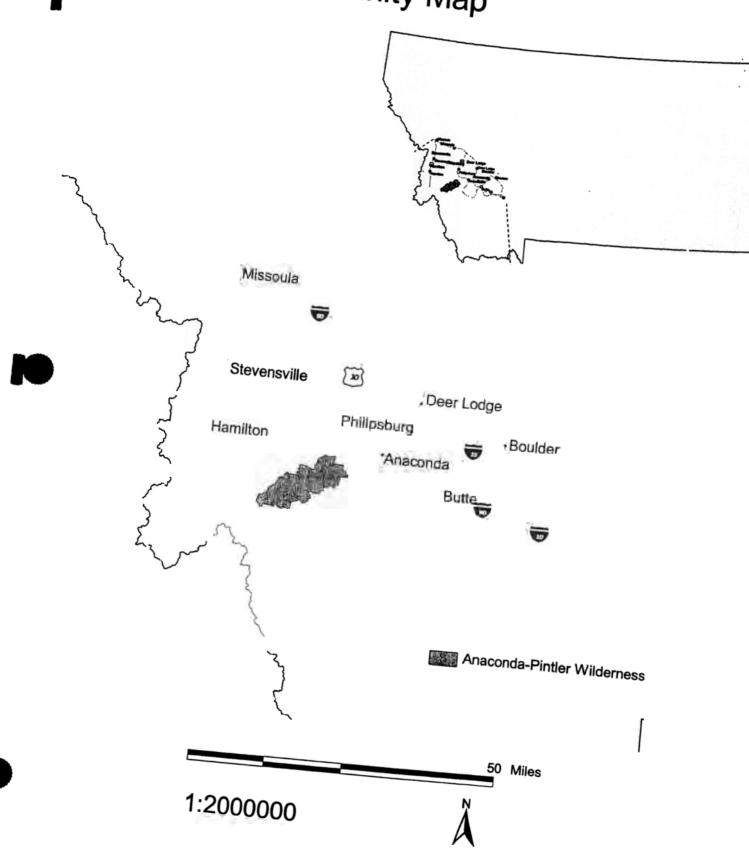
APPENDIX A

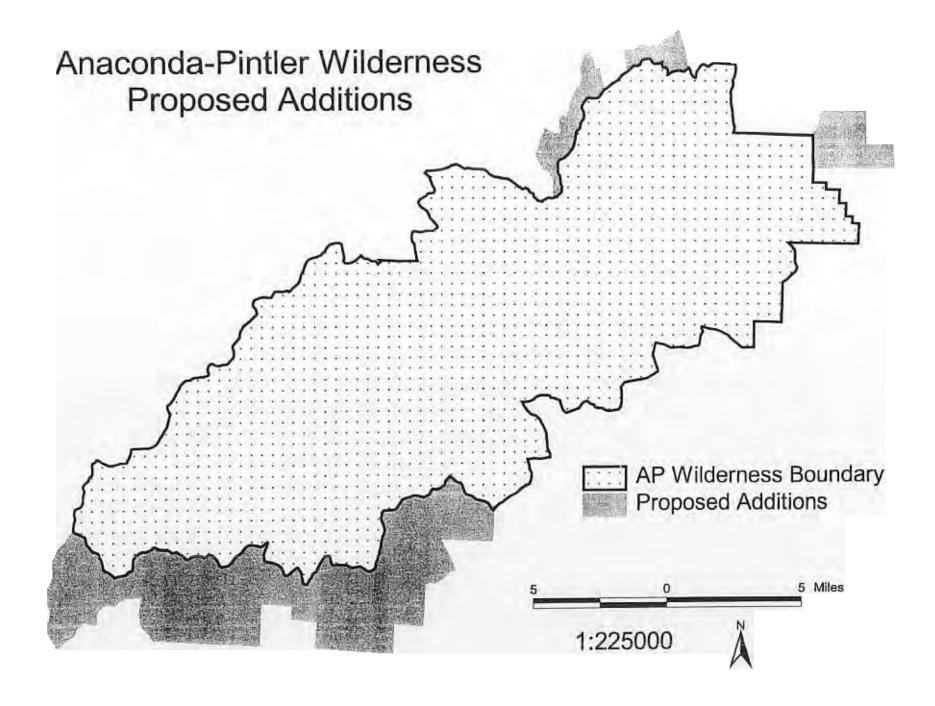
MAPS

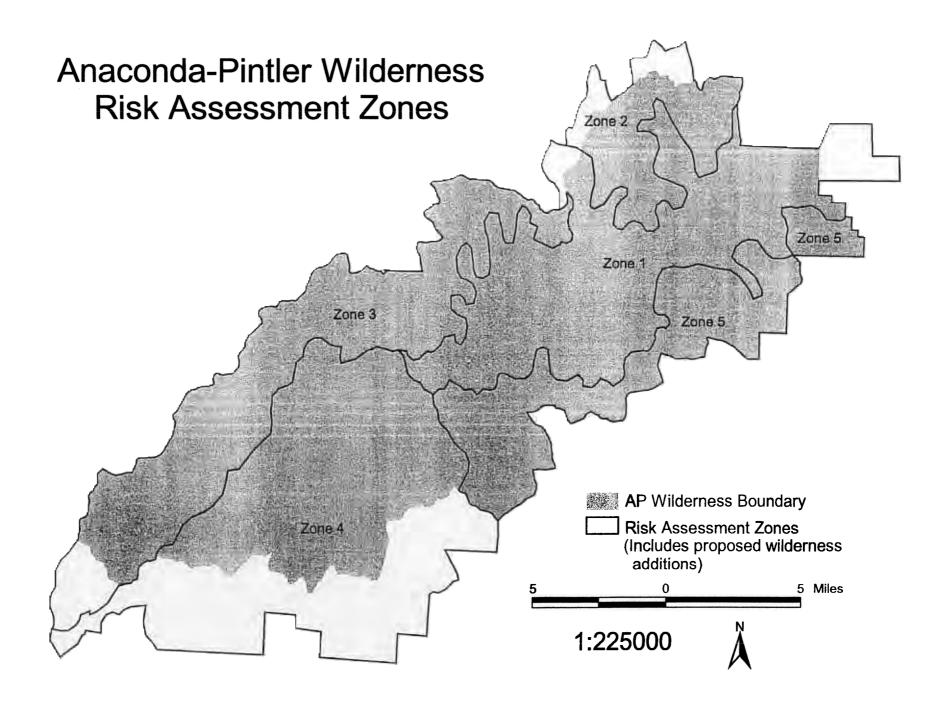
- Anaconda Pintler Wilderness Location
- Anaconda Pintler Wilderness with Proposed Additions
- Anaconda Pintler Fire Management Unit and Zones
- Anaconda Pintler Fuel Models and Fire Groups
- Montana Airsheds
- Research Natural Areas

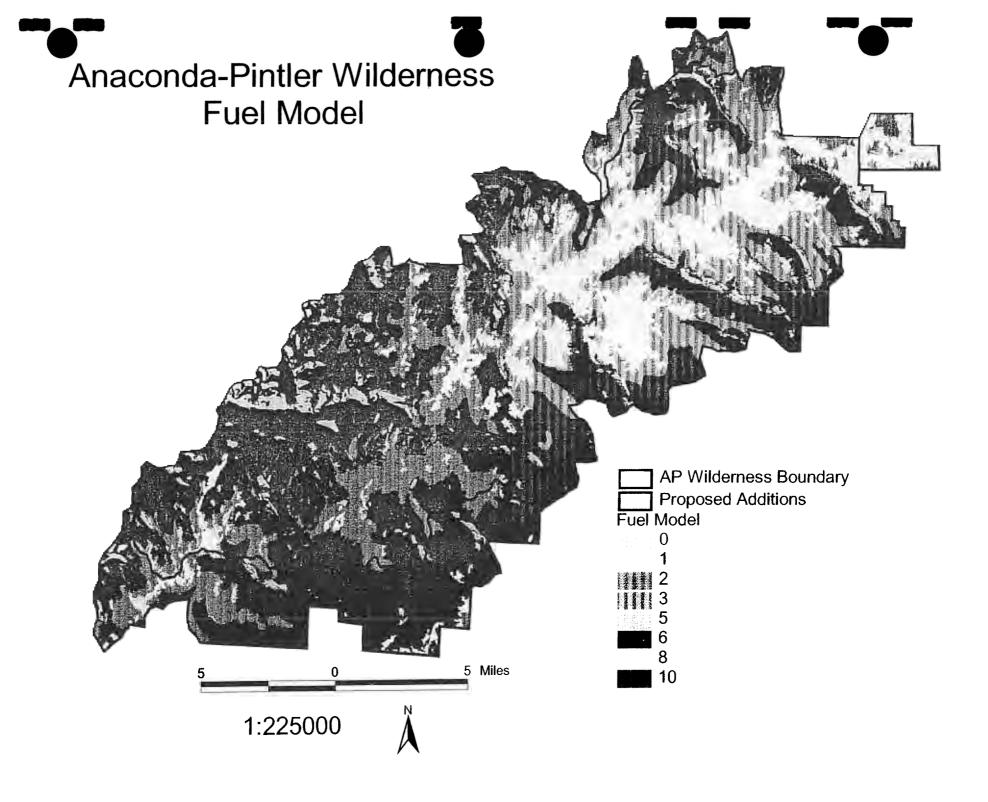


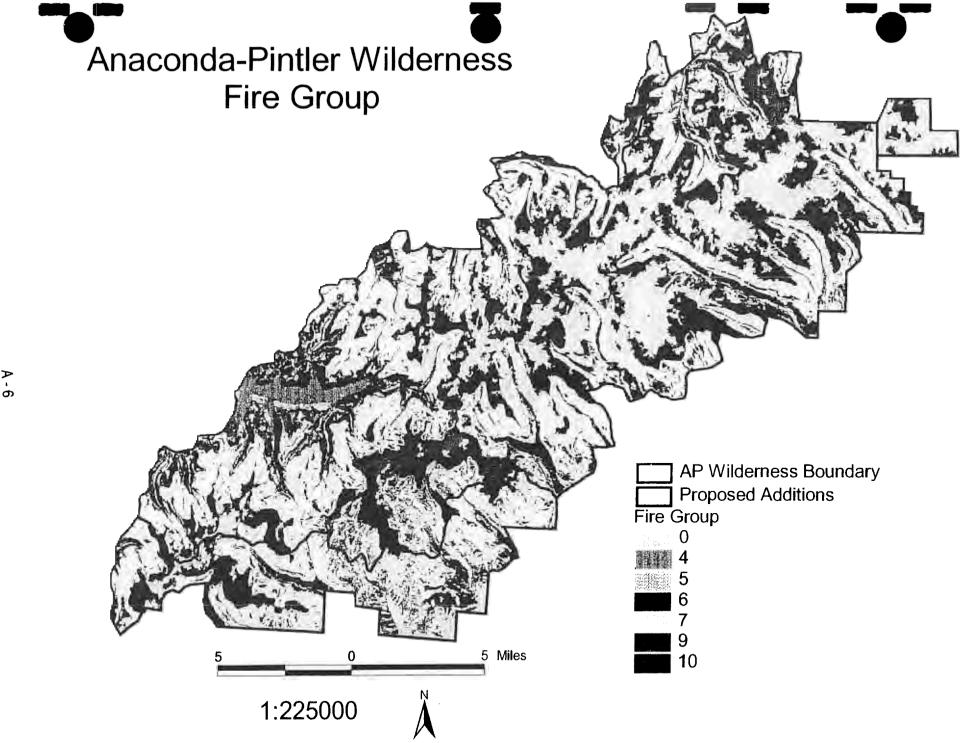
Anaconda-Pintler Wilderness Vicinity Map

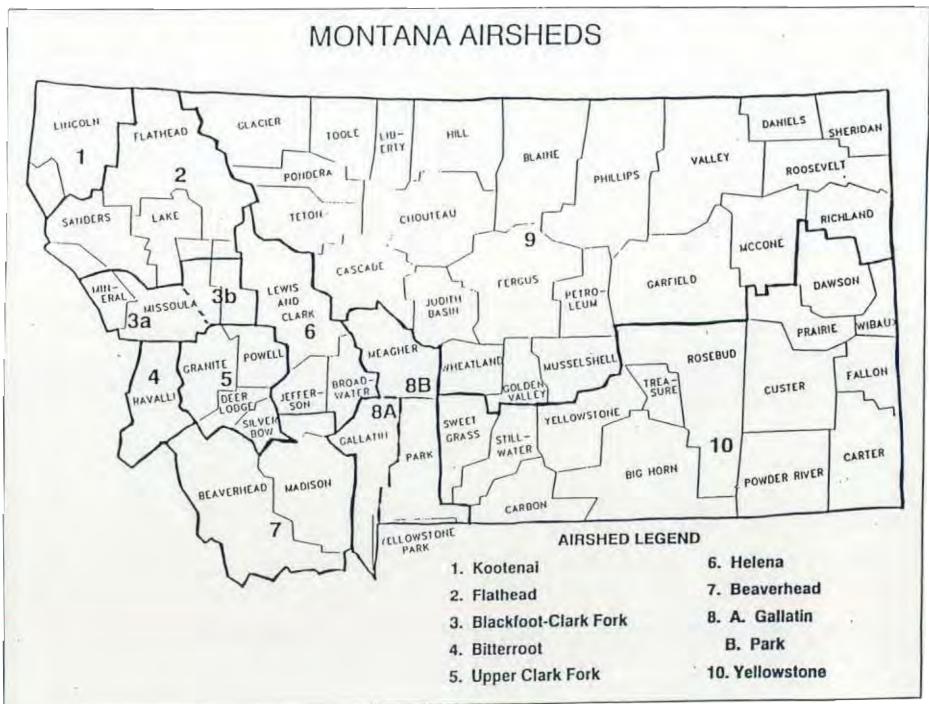














APPENDIX B

LONG-TERM RISK ASSESSMENT INFORMATION AND GRAPHS

- Rare Event Risk Assessment Process
- Philipsburg WS Energy Release Component Graph
- Philipsburg WS Precipitation Duration Graph
- Philipsburg WS Waiting-Time Probability Distribution Graph
- Philipsburg WS Cumulative Waiting-Time Probability Distribution Graph
- Wise River WS Energy Release Component Graph
- Wise River WS Precipitation Duration Graph
- Wise River WS Waiting-Time Probability Distribution Graph
- Wise River WS Cumulative Waiting-Time Probability Distribution Graph
- Teepee Point WS Energy Release Component Graph
- Teepee Point WS Precipitation Duration Graph
- Teepee Point WS Waiting-Time Probability Distribution Graph
- Teepee Point WS Cumulative Waiting-Time Probability Distribution Graph

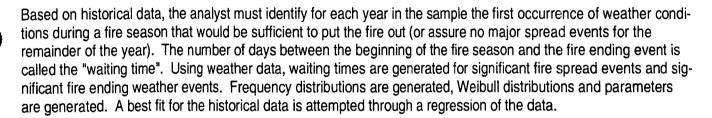


RARE EVENT RISK ASSESSMENT PROCESS

The Rare Event Risk Assessment Process (RERAP) was developed for Prescribed Fire Behavior Analysis by Marc Wiitala of Region 6. RERAP is a set of mathematical models that were developed specifically for the purpose of estimating the risk associated with fire movement and smoke incidents during the management of prescribed fires-natural and/or management ignited.

The models may be applied more generally to problems involving the risk that one of two independent events will arrive before the other. The arrival time for one of these independent events must be governed by the Weibull probability model; the other by an exponential probability model. Examples of questions addressed by the models are: "What is the probability a fire will exceed some distance before being terminated by a fire ending weather event?" "During management of prescribed fire, what is the probability of receiving the third major smoke event before a fire ending weather event?" or for the daily bus rider, "What is the probability that the bus will arrive before the bus rider arrives at the bus stop?"

Rare and significant fire spread events in many instances pose the greatest source of uncertainty for predicting fire movement. Fires that move one or more miles in a day can travel a lot of distance in an undesired direction. Variability in the number of these events that might be received over a period of time dictates the degree of risk faced by prescribed fire managers.

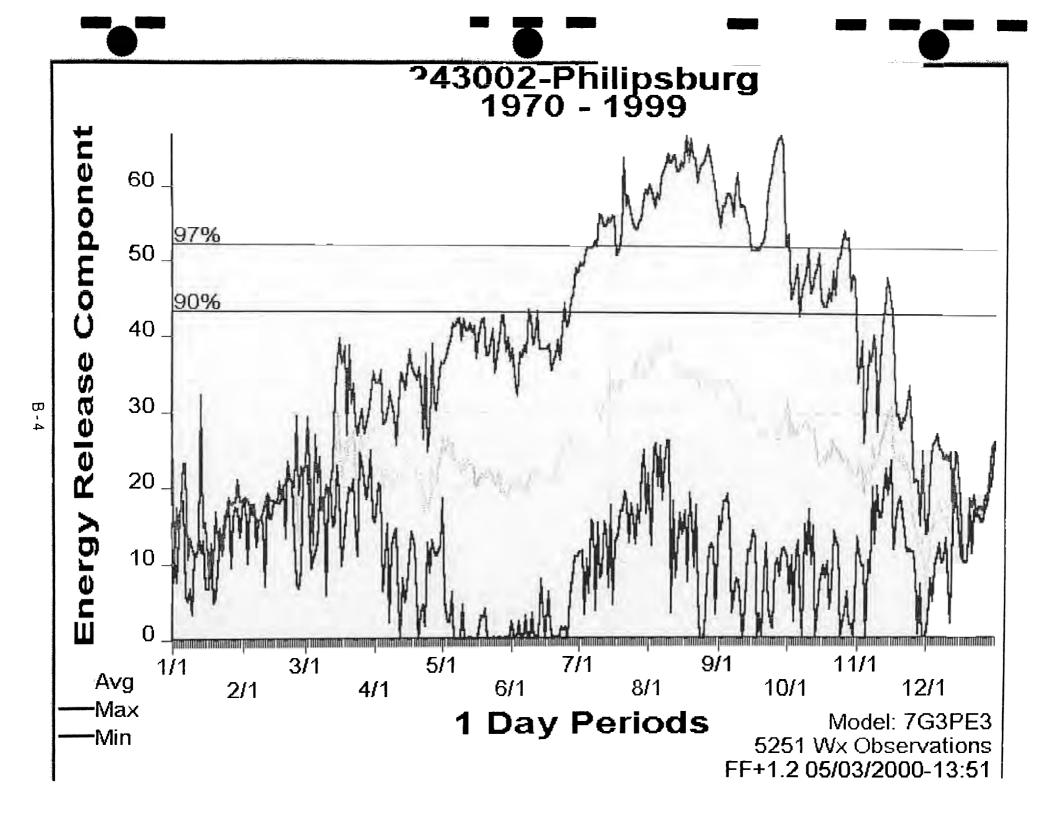


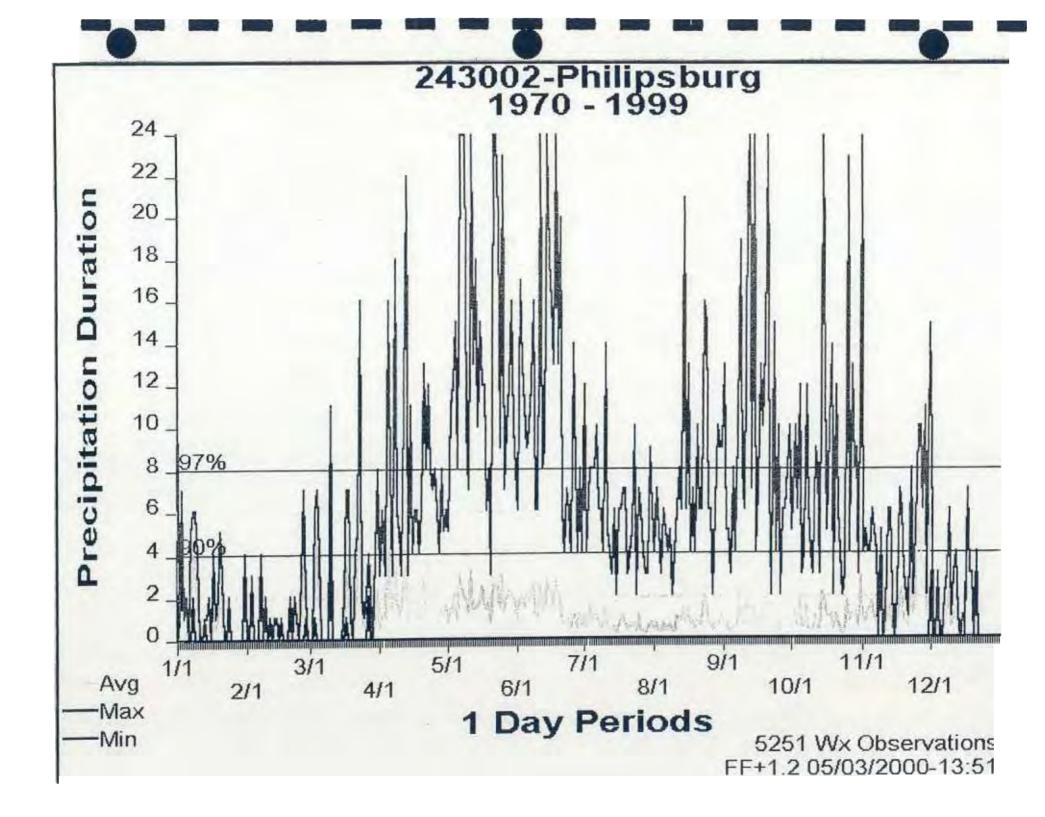
Once the base line historical data has been analyzed, additional analysis of ongoing prescribed fires is possible. Given an ignition in the Anaconda Pintler Wilderness, an analysis of the spread and direction of the fire can be quickly accomplished. Then estimates made for the length of time the fire may be allowed to burn before it may threaten the boundary, an historic cabin site, or improvements such as bridges, puncheons, etc. These time estimates would be used by managers as a planning aid for developing plans for preventing the prescribed fire from reaching the wilderness boundary or an improvement in its path.

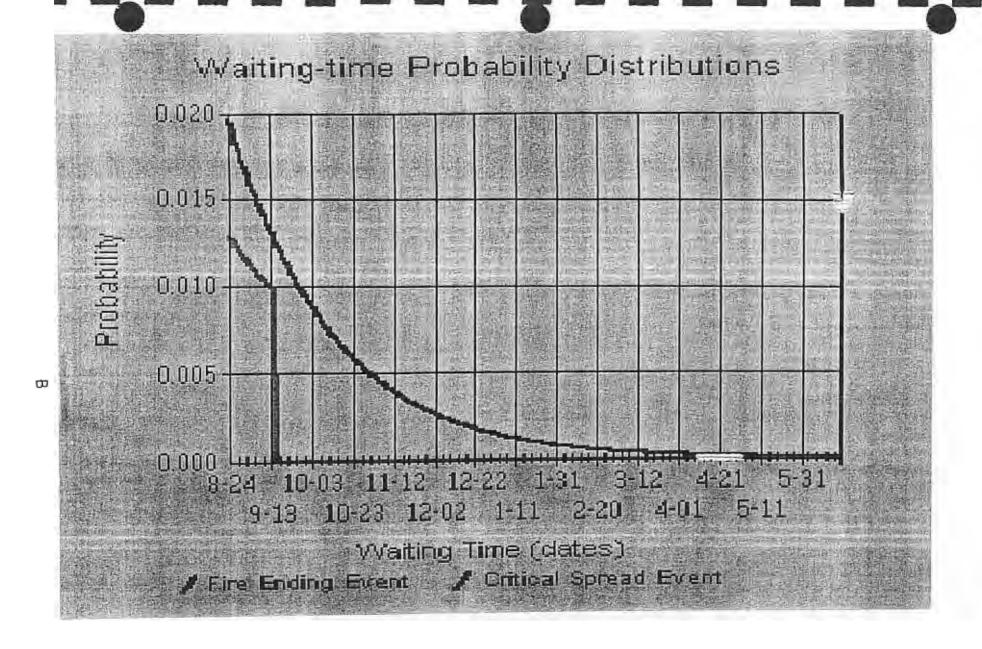
The critical spread event or Nth spread event is that spread event that will breach the wilderness or Maximum Allowable Perimeter (MAP) boundary. The model allows the use of up to twenty spread events. For purposes of the analysis, I used ten events for the Anaconda Pintler. This was due to my evaluation of the average number of significant frontal passages as evidenced by the precipitation "spikes" that occurred during the summer months for the Philipsburg and Wise River stations.

Fire ending weather events are a combination of the amount of precipitation received and the duration of that precipitation. A corresponding drop in the Energy Release Component (ERC) was also analyzed. Graphs of the Wise River and Philipsburg weather stations were generated to analyze these events. Analysis of these graphs show that on the average a significant amount of rainfall precipitation and duration occurs during July, August and September. A corresponding drop in the ERC is shown for these time periods.

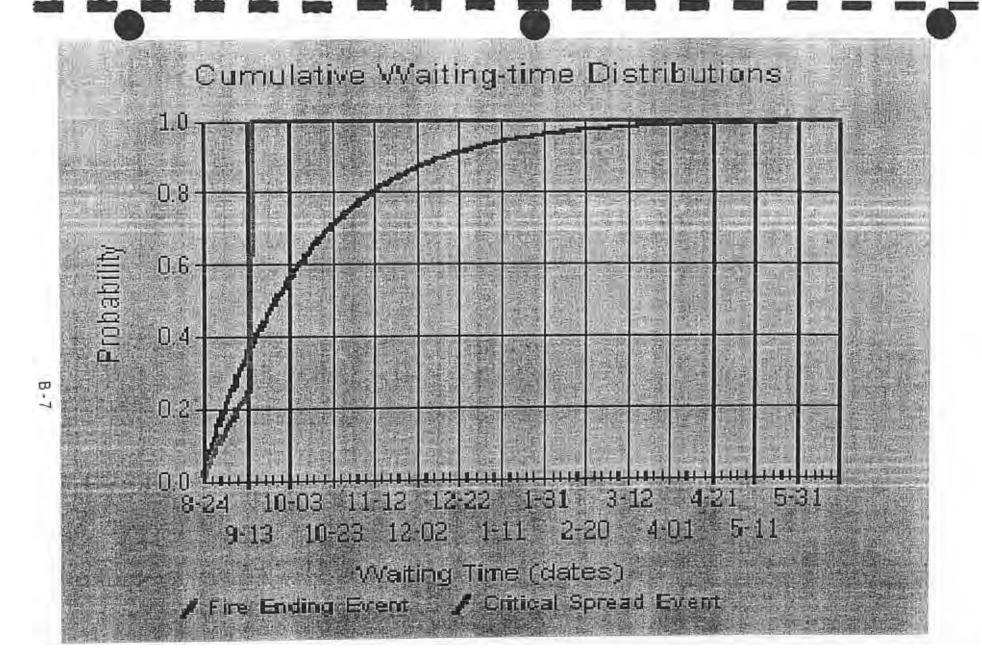
Further documentation is being developed by Region 6 for this model. Additional program development is occurring and updates should be available in the near future.



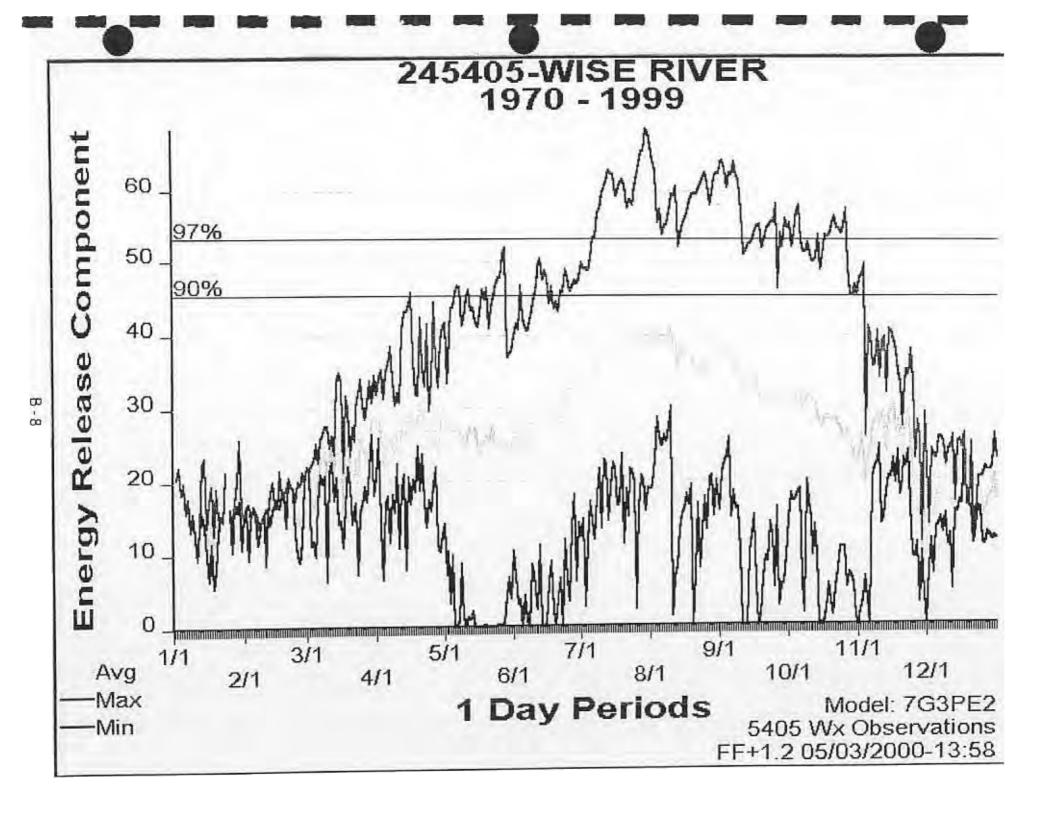


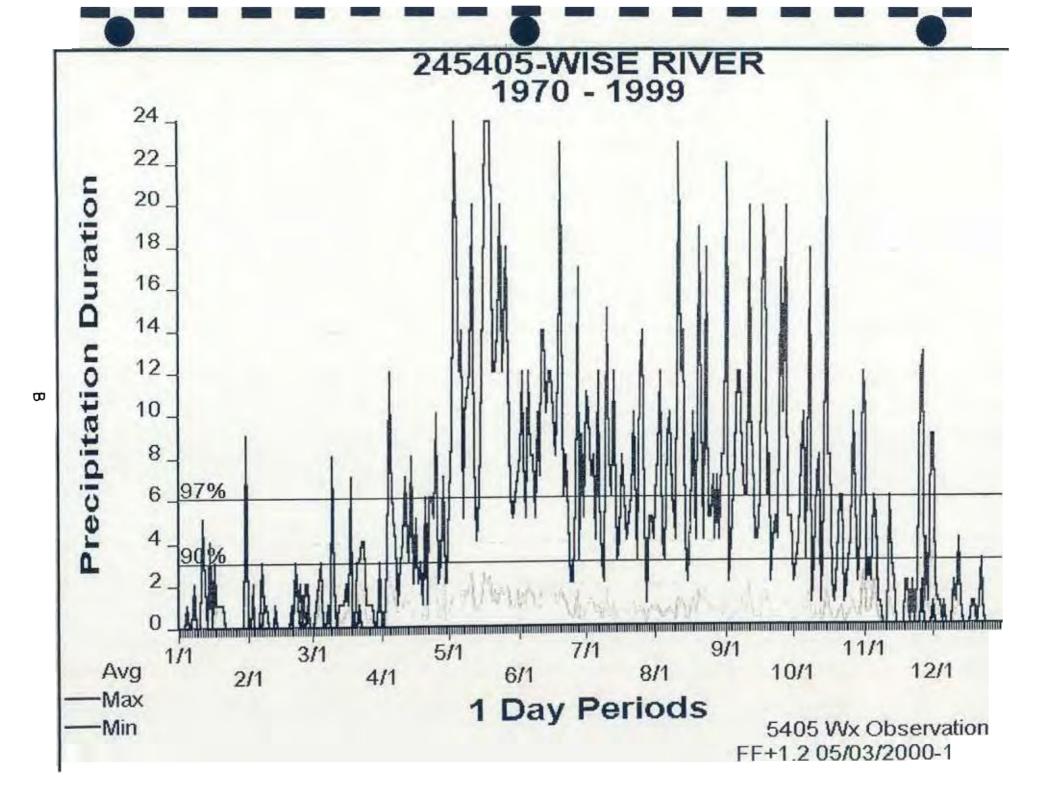


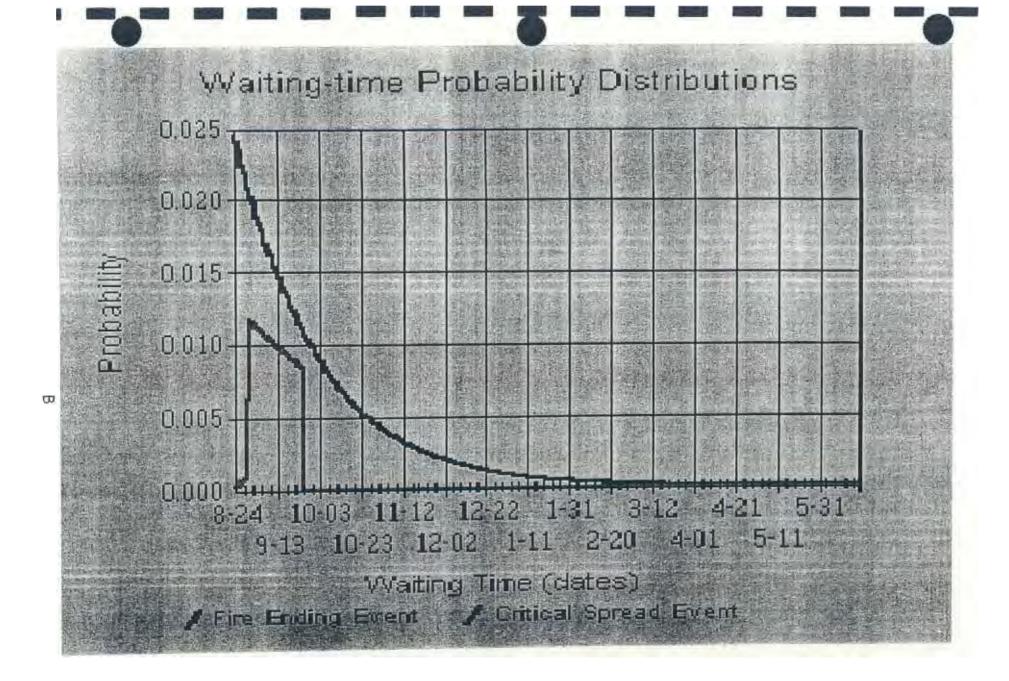
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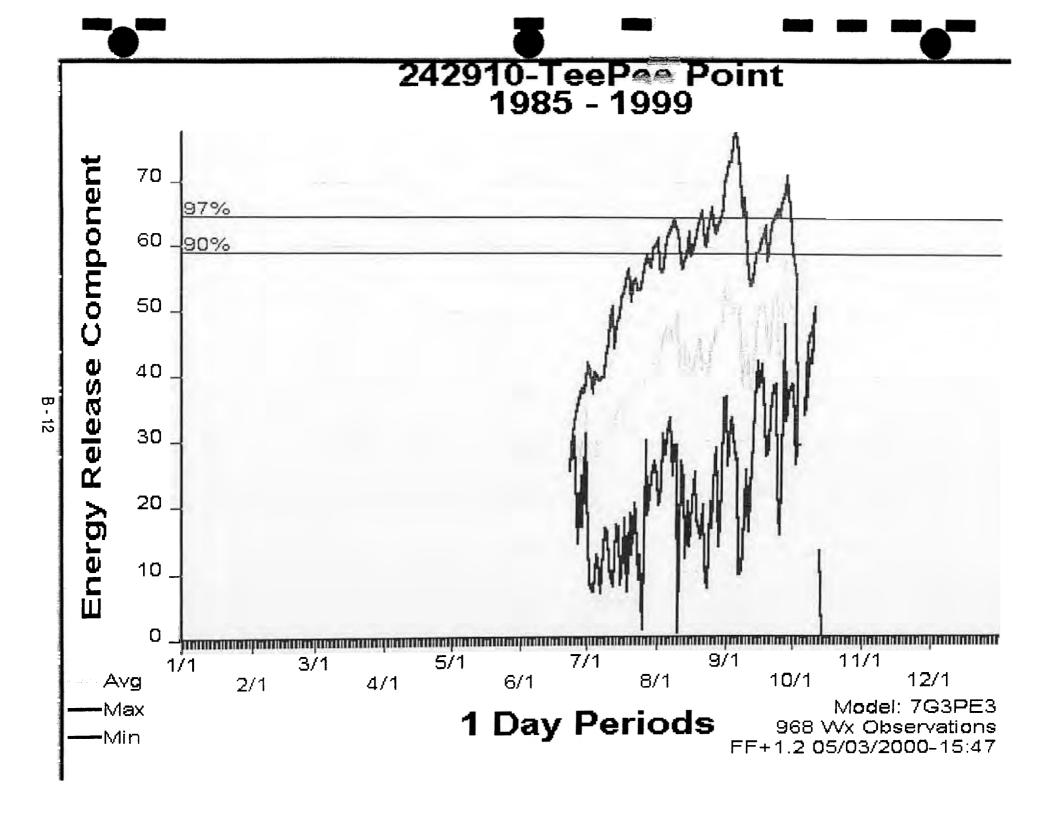


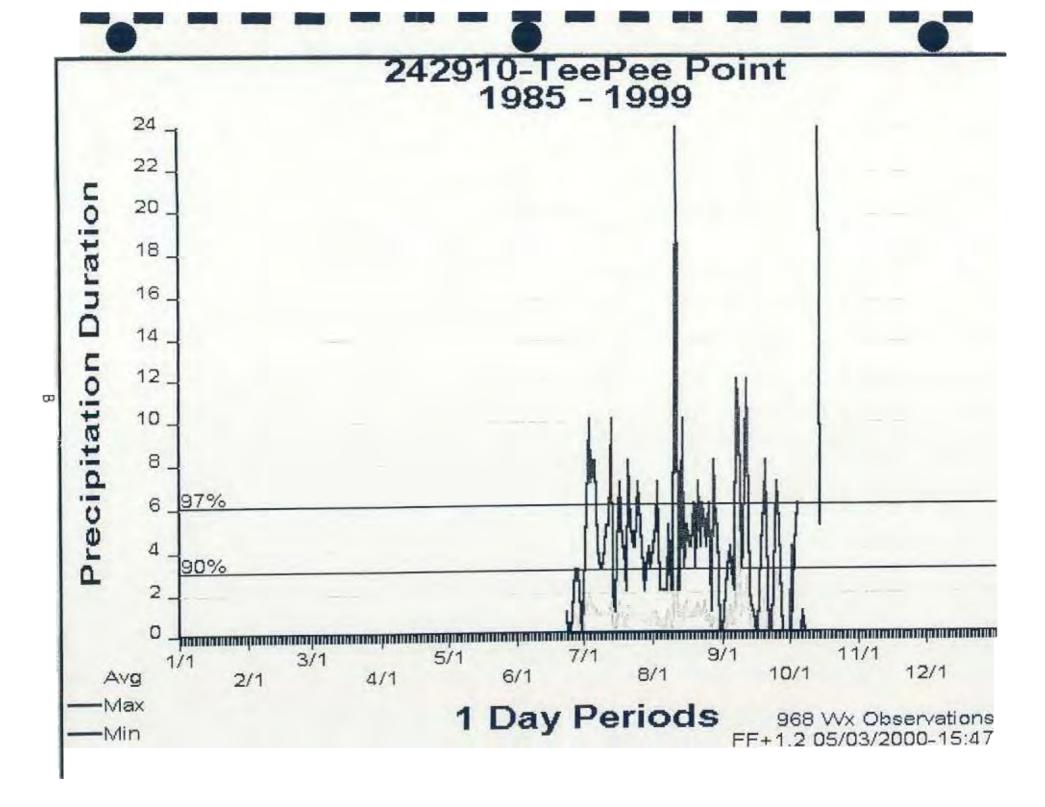


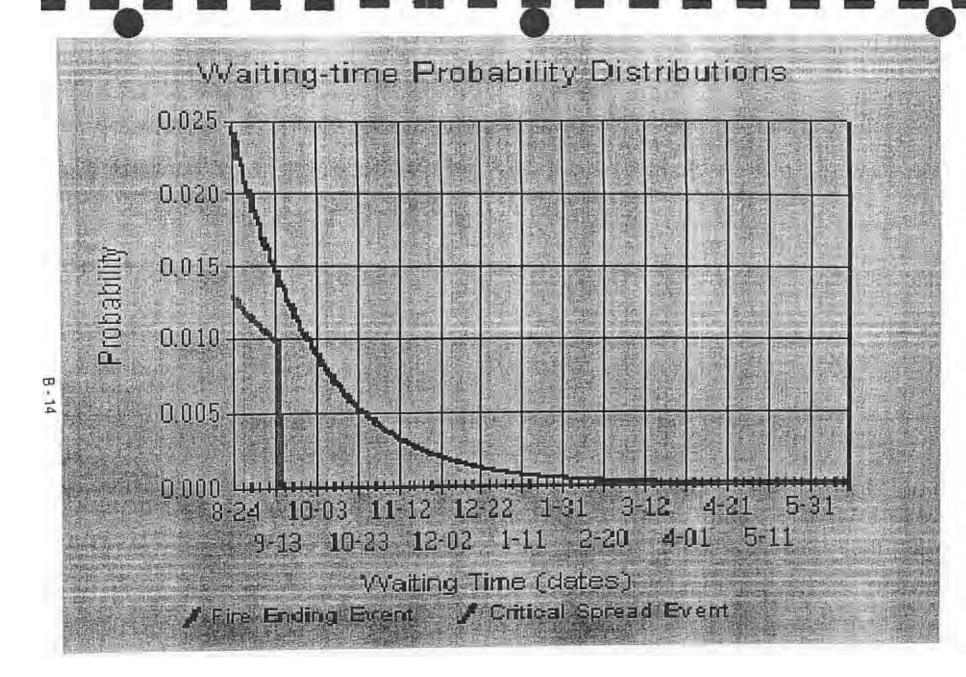


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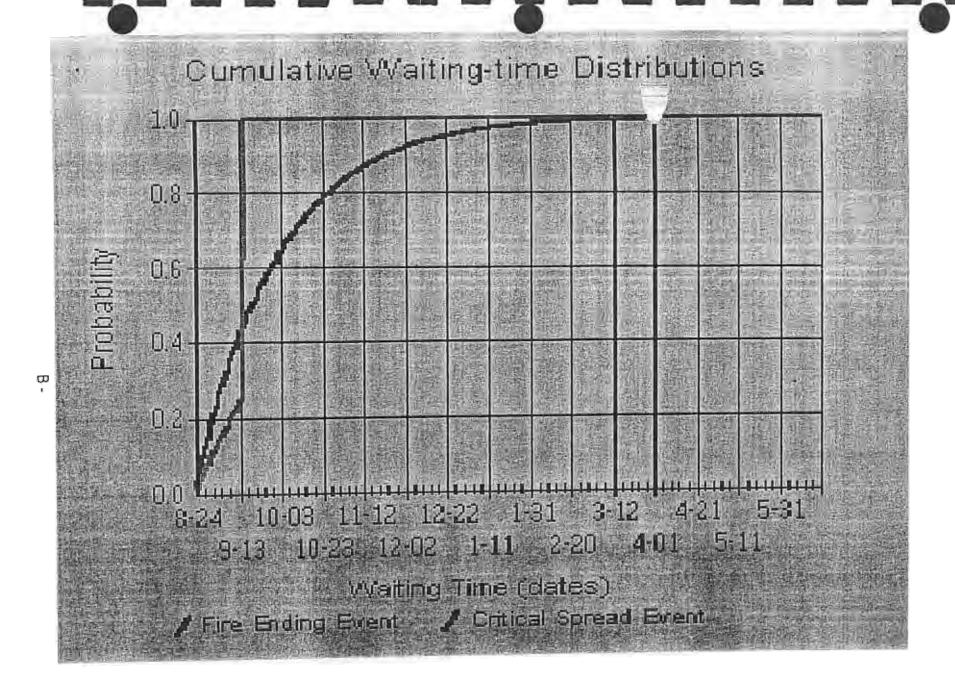
Wiser R ver Weather Station







Tee Pee Po nt Weather Stat on



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WFIP FORMS AND INSTRUCTIONS

This appendix contains reproducible forms and instructions for use in documenting implementation activities for wildland fires use projects in the Anaconda Pintler Wilderness. Included in this section are:

WFIP - Stage I: Initial Fire Assessment

- Fire Situation
- Initial Go/No Go Decision
- Anaconda Pintler Risk Assessment Charts (Zones 1 5)
- Wildland Fire Relative Risk Rating Chart

WFIP - Stage II: Short-Term Implementation Actions

- Short-Term Fire Behavior/Predictions and Risk Assessment
- Short-Term Implementation Action
- Complexity Analysis
- Stage III Need Assessment Chart

WFIP - Stage III: Long-Term Implementation Actions

Long-Term Implementation Action

Periodic Fire Assessment

- Part 1, Revalidation
- Part 2, Stage III Need Assessment

Other Forms and Reports

- Wildland Fire Use Record
- Wildland Fire Use Observation Record
- State of the Wilderness Report
- Structure Evaluation Worksheet
- Site Evaluation Worksheet
- Wildland Fire Use Evaluation



FIRE SITUATION

FIRE NAME:	·		FIRE NUMBER:	
Jurisdiction(s):				
Administrative Unit(s):				
FMP Unit(s):				
Geographic Area:				
Management Code:				
Start Date/Time:				
Discovery Date/Time:				
Current Date/Time:				
Current Size:				
Legal Description(s):	т.	R.	Sec.	Sub.
Latitude:				
Longitude:				
County:				
Local Description:				
-				
Cause:				

FUEL MODEL	_S / CONDITIONS:
	
WEATHER	Current:
L	
WEATHER	Predicted:
3	
FIRE BEHAVI	IOR - Current:
•	

FIRE BEHAVI	IOR - Predicted:
•	

•	
AVAILABIL <u>IT</u>	Y OF RESOURCES:
	



Decision Criteria Checklist

Decision Element	YES	NO
Is there a threat to life, property, or resources that cannot be mitigated?		
Are potential effects on cultural and natural resources outside the range of acceptable effects?		
Are relative risk indicators and/or risk assessment results unacceptable to the appropriate Agency Administrator?		
Is there other proximate fire activity that limits or precludes successful management of this fire?		
Are there other Agency Administrator issues that preclude wildland fire use?		

The Decision Criteria Checklist is a process to assess whether or not the situation warrants continued wildland fire use implementation. A "YES" response to any element on the checklist indicates that the appropriate management response should be suppression-oriented.

Recommended Response Action (check appropriate box)	
NO-GO (Initial attack/suppression action)	
GO (Other appropriate management response)	

Signature:	Date:
Jigilatui C.	Dutc.



High Elevation - Zone 1

Weather Station: Philipsburg

*Adjective Rating	6/1 - 15	6/15 - 30	7/1 - 15	7/15 - 31	8/1 - 15	8/15 - 31	9/1 - 15	9/15 - 30
Low					#77 m			
Moderate						r all al		
High								
Very High								
Extreme								

*If Keech-Byram Drought Index indicates significant long term drought conditions, use next highest danger rating.

High Risk Moderate Risk Low Risk

Cutaway - Zone 2

Weather Station: Philipsburg

*Adjective Rating	6/1 - 15	6/15 - 30	7/1 - 15	7/15 - 31	8/1 - 15	8/15 - 31	9/1 - 15	9/15 - 30
Low								
Moderate								
High								
Very High		l l						
Extreme								

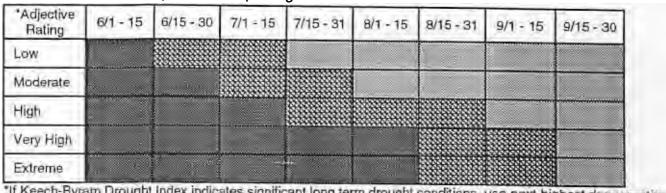
*If Keech-Byram Drought Index indicates significant long term drought conditions, use next highest danger rating.

High Risk Moderate Risk Low Risk





Weather Station: Teepee Pt./Philipsburg



*If Keech-Byram Drought Index indicates significant long term drought conditions, use next highest danger rating.

High Risk Moderate Risk Low Risk

Mystic - Zone 4

Weather Station: Teepee Pt./Wise River

*Adjective Rating	6/1 - 15	6/15 - 30	7/1 - 15	7/15 - 31	8/1 - 15	8/15 - 31	9/1 - 15	9/15 - 30
Low	1-0-10-10-10-10-10-10-10-10-10-10-10-10-							
Moderate								
High								
Very High								
Extreme								

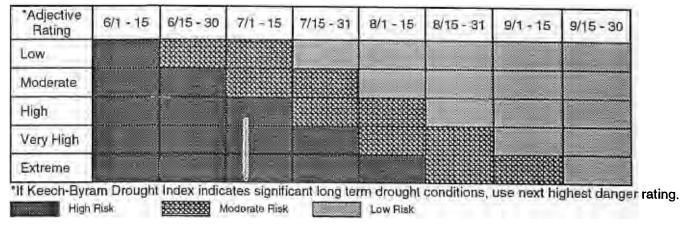
*If Keech-Byram Drought Index indicates significant long term drought conditions, use next highest danger rating.

High Risk Moderate Risk Low Risk

STAGE 1 ANACONDA PINTLER RISK ASSESSMENT CHARTS

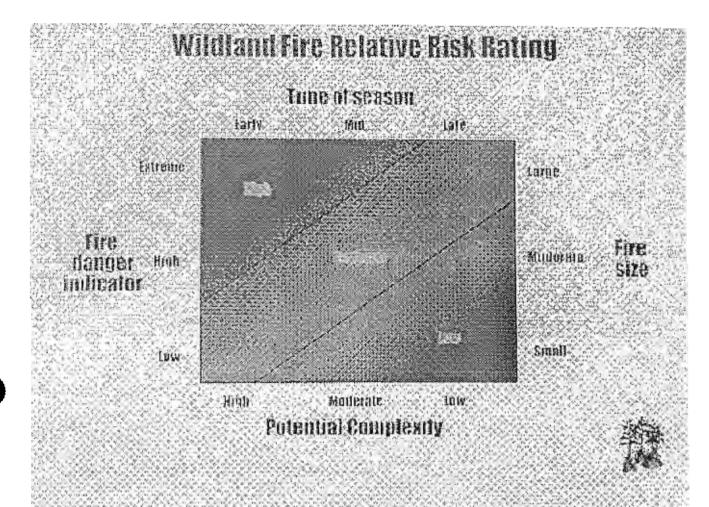
Wise River - Zone 5

Weather Station: Wise River



Instructions for Anaconda Pintler Risk Assessment Charts

- 1. Select the chart for the zone in the fire is located. For fires located near the boundary of two zones it may be necessary to evaluate the risk for both zones.
- 2. Determine the adjective rating for the selected zone by determining the ERC value for NFDRS Fuel Model G for the appropriate weather station. The adjective rating is stratified by percentile rank (0-20th Low, 21-50th Moderate, 51-80th High, 81-95th Very High, 95th+Extreme) of the ERC value. The ERC values and corresponding adjective ratings can be obtained from the fire management plan. When selecting the adjective rating it is important to look at the overall trend and average over several days and not just one days reading.
- 3. Select the column with the time period in which the fire is being assessed and crossmatch it with the row of the appropriate adjective rating.
- 4. From the intersection of the selected row and column determine the risk rating based on the shaded area in which the intersected cell is located.



Determination of Relative Risk Rating for Wild)and Fires. To obtain relative risk, connect lines between the top and bottom variables and the left and right hand variables. Where these lines cross represents the relative risk for this specific fire.

Instructions for Wildland Fire Relative Risk Rating Chart

To use this chart, assessments must be made of four variables:

1. Fire Danger Indicator.

The appropriate fire danger indicator can be derived from components or indexes from the National Fire danger rating system (NFDRS) outputs.

2. Time of Season.

The time of season is an indicator of the potential duration of newly ignited fires. The earlier the season, the longer the potential duration of the fire.

3. Fire Size.

The fire size represents the current fire size and should be available from the Fire Situation information.

4. Potential Complexity.

Potential complexity is an estimate of complexity. If time and sufficient information are available to complete the full Wildland and Prescribed Fire Complexity Rating (see Chapter 3), then the result of that analysis can provide this information. If sufficient time and information are not available, then complexity must be estimated by local fire staff and used for this variable.

To obtain the relative risk rating, connect the top and bottom variables with a single line, then connect the left and right variables with a single line. Determine the relative risk of this fire at the intersection of the two lines. Use the relative risk as input information for the Decision Criteria Checklist. Neither a high or low rating necessarily predispose a "yes" or "no" answer. They provide an indication, but the line officer must still decide what area of risk is acceptable.



SHORT-TURM IMPLEMENTATION ACTION

Attach Stage I information.

Action Items	Information specific to this fire
Objectives and Desired Effects	
Safety Considerations	
External Concerns	
Environmental Concerns	

Wildland Fire Implementation Plan - Stage II

Threats		
Short-Term Actions		
(describe)		
Estimated Costs		
Signature		
Signature		
Title/Date		



WILDLAND AND PRESCRIBED FIRE COMPLEXITY RATING WORKSHEET

Complexity element	Weighting factor	Complexity value	Total points
Safety	5		ponite
Threats to boundaries	5		
Fuels and fire behavior	5		
Objectives	4		
Management organization	4		
Improvements	3		
Natural, cultural, social values	3		
Air quality values	3		
Logistics	3		
Political concerns	2		
Tactical operations	2		
Interagency coordination	1		
Total complexity points			
Complexity Rating (circle)	L	M	Н
Complexity Value Breakpoints:	Low Moderate High	40 - 90 91 - 140 141 - 200	

The Wildland and Prescribed Fire Complexity Analysis provides a method to assess the complexity of both wildland and prescribed fires. The analysis incorporates an assigned numeric rating complexity value for specific complexity elements that are weighted in their contribution to overall complexity. The weighted valued is multiplied times the numeric rating value to provide a value for that item. Then all values are added to generate the total complexity value. Breakpoint values are provided for low, moderate, and high complexity values.

The complexity analysis worksheet is accompanied by a guide to numeric values for each complexity element shown. The guide is provided on the following pages.



Complexity Element		Guide to Numeric Rating	
	1	3	5
Safety	Safety issues are easily identifiable and mitigated	 Number of significant issues have been identified All safety hazards have been identified on the LCES worksheet and mitigated 	 SOF1 or SOF2 required Complex safety issues
Threats to Boundaries	Low threat to boundaries POI<50% Boundaries naturally defensible	 Moderate threat to boundaries 50<poi<70%< li=""> Moderate risk of slopover or spot fires Boundaries need mitigation actions for support to strengthen fuel breaks, lines, etc. </poi<70%<>	 High threat to boundaries POI>70% High risk of slopover or spot fires Mitigation actions necessary to compensate for continuous fuels
Fuels/Fire Behavior	Low variability in slope & aspect Weather uniform and predictable Surface fuels (grass, needles) only Grass/shrub, or early seral forest communities Short duration fire No drought indicated	 Moderate variability in slope & aspect Weather variable but predictable Ladder fuels and torching Fuel types/loads variable Dense, tall shrub or mid seral forest communities Moderate duration fire Drought index indicates normal conditions to moderate drought; expected to worsen 	High variability in slope & aspect Weather variable and difficult to predict Extreme fire behavior Fuel types/loads highly variable Late seral forest communities or long return interval fire regimes Altered fire regime, hazardous fuel/stand density conditions Potential long duration fire Drought index indicates severe drought; expected to continue

_	V	•
ì		

Complexity Element	Guide to Numeric Rating				
	1	3	5		
Objectives	Maintenance objectives Prescriptions broad Easily achieved objectives	Restoration objectives Reduction of both live and dead fuels Moderate to substantial changes in two or more strata of vegetation Objectives judged to be moderately hard to achieve Objectives may require moderately intense fire behavior	Restoration objectives in altered fuel situations Precise treatment of fuels and multiple ecological objectives Major changes in the structure of 2 or more vegetative strata Conflicts between objectives and constraints Requires a high intensity fire or a combination of fire intensities that is difficult to achieve		
Manageme- nt Organiza- tion	Span of control held to Single resource incident or project	Span of control held to 4 Multiple resource incident or project Short-term commitment of specialized resources	Span of control greater than 4 Multiple branch, divisions or groups Specialized resources needed to accomplish objectives Organized management teams (FUMT, IMT)		
Improveme- nts to be protected	No risk to people or property within or adjacent to fire	Several values to be protected Mitigation through planning and/or preparations is adequate May require some commitment of specialized resources	Numerous values and/or high values to be protected Severe damage likely without significant commitment of specialized resources with appropriate skill levels		
Natural, Cultural, and Social Values to be protected	No risk to natural, cultural, and/or social resources within or adjacent to fire	Several values to be protected Mitigation through planning and/or preparations is adequate May require some commitment of specialized resources	 Numerous values and/or high values to be protected Severe damage likely without significant commitment of specialized resources with appropriate skill levels 		

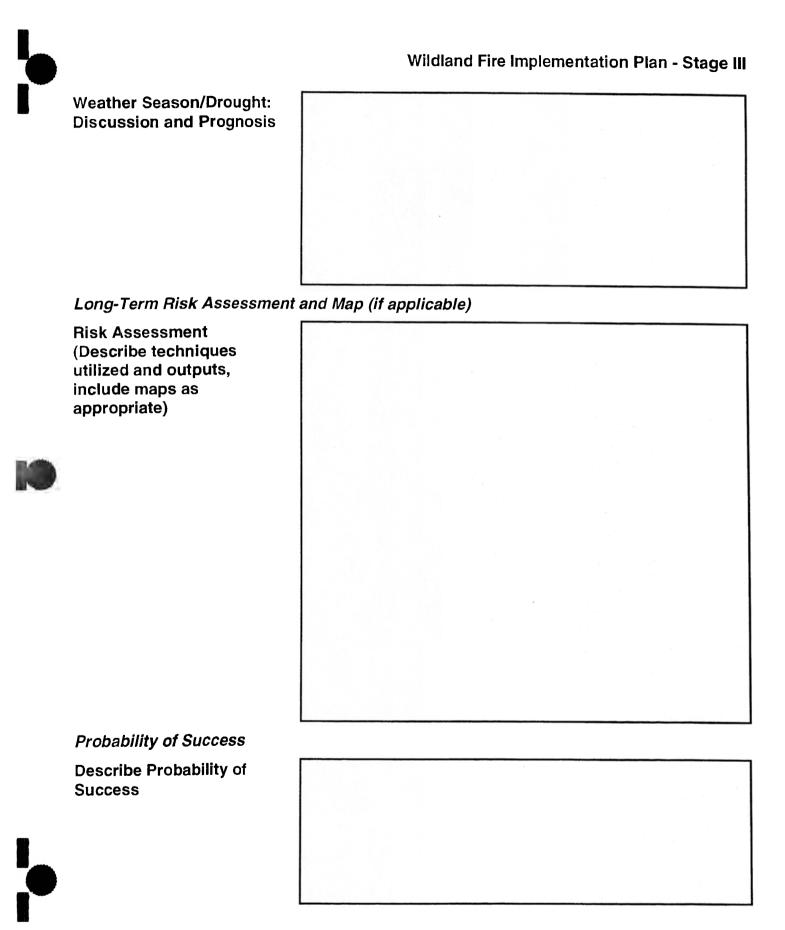
Complexity Element		Guide to Numeric Rating						
Air Quality Values to be Protected	Few smoke sensitive areas near fire Smoke produced for less than 1 burning period Air quality agencies generally require only initial notification and/or permitting No potential for scheduling conflicts with cooperators	Multiple smoke sensitive areas, but smoke impact mitigated in plan Smoke produced for 2-4 burning periods Daily burning bans are sometimes enacted during the burn season Infrequent consultation with air quality agencies is needed Low potential for scheduling conflicts with cooperators	Multiple smoke sensitive areas with complex mitigation actions required Health and visibility complaints likely Smoke produced for greater than 4 burning periods Multi-day burning bans are often enacted during the burn season Smoke sensitive class 1 airsheds Violation of state and federal health standards possible Frequent consultation with air quality agencies is needed High potential for scheduling conflicts					
Logistics	Easy access Duration of fire support is less than 4 days	Difficult access Duration of fire support between 4 and 10 days Logistical position assigned Anticipated difficulty in obtaining resources	 No vehicle access Duration of support is greater than 10 days Multiple logistical positions assigned Remote camps and support necessary 					
Political Concerns	 No impact on neighbors or visitors No controversy No media interest 	Some impact on neighbors or visitors Some controversy, but mitigated Press release issued, but no media activity during operations	 High impact on neighbors or visitors High internal or external interest and concern Media present during operations 					

Complexity Element		Guide to Numeric Rating				
	1	3	5			
Tactical Operations	 No ignition or simple ignition patterns Single ignition method used Holding requirements minimal 	Multiple firing methods and/or sequences Use of specialized ignition methods (i.e. terra-torch, Premo Mark III) Resources required for up to one week Holding actions to check, direct, or delay fire spread	 Complex firing patterns highly dependant upon local conditions Simultaneous use of multiple firing methods and/or sequences Simultaneous ground and aerial ignition Use of heli-torch Resources required for over 1 week Multiple mitigation actions at variable temporal and spatial points identified. Success of actions critical to accomplishments of objectives Aerial support for 			
Interagency Coordina- tion	Cooperators not involved in operations No concerns	 Simple joint- jurisdiction fires Some competition for resources Some concerns 	Complex multi- jurisdictional fires High competition for resources High concerns			

Stage III: Long-Term Implementation Actions

Attach Stage I and Stage II information. Update and/or revise Stage I and II as necessary.

	Natural and Cultural Resource Objectives and Constraints/ Considerations	nent Consideratio	ons	
•	Maximum Manageable Area ((AAAAA)		
		WWA)		
	Acres in MMA: Attach Map of MMA			
	Fire Projections, Weather, an	d Map		
	Projected Fire Area Under <u>Ex</u> Weather Conditions	pected .	For date: Area:	
	Projected Fire Area Under Ex <u>Severe</u> Weather Conditions	perienced	For date: Area:	



Wildland Fire Implementation Plan - Stage III

Threats	
Threats to MMA	
Threats to Public Use and	
Firefighter Safety	
Smoke Dispersion and	
Effect	
Other	



Monitoring Actions Describe Monitoring Actions, Frequency,			
Duration			
Holding Actions			
Holding Actions Describe Holding Actions,			
Management Action Points that initiate these			
actions, and Key to Map if			
necessary			

Wildland Fire Implementation Plan - Stage III

Resources Needed To Ma Describe resources necessary to accomplish ignition, holding, and monitoring	anage the Fire	
Estimated Costs of Man Describe costs in terms of resources needed, projected duration, etc.	aging the Fire	
Contingency Plans Describe Contingency actions, management action points that initiate them, resources needed, etc.		



	Wildiana	i Fire implementation Plan - Stage III
Information Plan Describe Information Plan, Contacts, Responsibilities, etc.		
Post-burn Evaluation Describe post-burn evaluation procedures, resource requirements, costs, duration, etc.		
Signatures Include signatures/ dates for preparing, approving, and any concurring individuals		

Instructions for Completing Stage III Long-Term Implementation Actions Form

Objectives and Risk Assessment Considerations

Describe natural/cultural resource objectives and constraints/considerations. Identify RNAs, cultural sites or other resources (wildlife, fisheries, recreation, etc.) within the severe case's projected perimeter. Refer to the RNA descriptions for specific fire management direction. If the ignition is outside designated wilderness, document and discuss the fire and land management objectives. If the projections indicate possible impact to historic sites, refer to Site Protection Plans and Evaluation worksheets for specific objectives and level of fire protection needed for their protection (Appendix X).

Maximum Manageable Area (MMA)

The term "maximum manageable area" serves as the descriptor of the wildland fire use geographic or spatial prescription element. The identification of the MMA should include input from staff specialists. An interdisciplinary team approach is recommended so that resource issues and concerns are known. The interdisciplinary team should address a strategy for additional starts within the agreed upon MMA. Should the team decide additional starts can be managed in the MMA, these fires can be analyzed in the original WFIP, Stage III, if the ignitions occur within the required specified frame. A fire occurs after this time frame is considered a separate event and a separate WFIP is required. Any new fires in an existing MMA must address the potential affects of the existing fires.

The MMA will be developed as part of the WFIP, Stage III.

All actions planned to reduce fire spread will be annotated by holding lines that are developed within the MMA and displayed in the WFIP.

- Once established in the WFIP, Stage III and approved by the Agency Administrator, this
 area is fixed and not subject to change.
- The MMA will define firm limits of management capability to accommodate the social, political, and resource impacts for all wildland fire use.
 An MMA can be developed across zones within the Anaconda Pintler Fire Management Unit.

Wildland Fire Implementation Plan - Stage III

Fire Projections, Weather, and Map

This portion of the analysis must be performed by a qualified FBAN or LTAN. As a minimum, BEHAVE will be used to assist with projecting fire behavior. As time and resources are available, projections will be validated using FARSITE, RERAP and other tools listed in Table 6 page 53 of the Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide.

Expected and severe scenarios are used to describe the range of fire behavior and define the scope of the effects analysis. Issues in the analysis are addressed relative to the expected effects and consideration of potential effects should the severe scenario occur. As part of the analysis and validation process, designate the fire reaching the expected scenario perimeter as a trigger point to reassess the fire. When that point is reached, new expected and severe scenarios should be developed, and other elements of the WFIP, Stage III analysis adjusted accordingly. It is not productive to plan for events which are not expected to occur, but it is important that planning provide for an array of outcomes (see Contingency Actions below).

No restrictions are placed on fires which are projected to cross into zones of elevated risk. However, the risk assessment must address elevated risks in the zone relative to current and expected conditions.

Project fire area under <u>expected</u> weather conditions. Describe the fire projection procedures and assumptions used in determining the expected fire projection.

Project fire area under experienced <u>severe</u> weather conditions. Describe the fire projection procedures and assumptions used in determining the severe fire projection.

Weather Season/Drought Discussion and Prognosis

Discuss recent weather patterns, predicted weather, and their effects on the fire season and behavior. Discuss ERC trend, compared to 80th percentile and historic minimums and maximums. Discuss drought conditions using KBDI, 1000-hr fuel moisture, NDVI greenness imagery, or other drought indicators. Fire, weather, and drought information can be accessed via the Internet through several sources such as the Wildland Fire Assessment System (WFAS). Fire weather forecasters at the Missoula office of the National Weather Service are also an excellent source of information. They can augment the extended and 30 to 90 day forecasts trends with background information about the different weather model predictions to provide a confidence level regarding the seasonal outlook.



Wildland Fire Implementation Plan - Stage III

Long-Term Risk Assessment and Map (if applicable)

Describe risk assessment techniques utilized and outputs. Include maps as appropriate.

Probability of Success

Describe the probability of success.

Threats to MMA

As a minimum, give a qualitative assessment of expected risk to the MMA perimeter. The depth of the assessment should tier to the proximity of the expected and severe fire behavior projections to the MMA boundary. An identified trigger point may help evaluate the threat to the MMA as a fire progresses. A trigger point refers to a geographic location, point in time, or weather situation that initiates some sort of management action. Actions start with reviewing original assumptions of the WFIP and projections, and may lead to implementing the holding actions identified in the burn plan. Further analysis may result in revising the WFIP, Stage III. New fire projections, risk assessment, and approval would be required. A quantitative assessment using probability outputs from RERAP can also be used. Document inputs and data sources used in these assessments.



Threats to Public Use and Firefighter Safety

If firefighters or monitors are committed on-the-ground, their safety becomes the highest priority. Identify, in advance, safety zones and escape routes and estimate travel times to those areas. Make this information known to all those involved with the monitoring efforts.

Identify areas of anticipated threat to public use such as trails and trail heads, inholdings, outfitter camps, campgrounds, and other areas of known recreation use that are within the severe projection perimeter. If closures are anticipated, provide specific information at trail heads in addition to the Anaconda Pintler Wilderness fire management program signs which are already in place. Follow the I & E plan to inform outfitters and residents of fire status.

Smoke Dispersion and Effects

Discuss how topography, winds, and other weather patterns (such as high pressure subsidence) influence smoke dispersion, and discuss the effects to points of concern. If smoke effects cause safety hazards, for example at backcountry airstrips, address specific measures to protect public safety, and specify the threshold at which precautions will be enacted.



Monitoring Actions

All ongoing wildland fire use will be monitored during the life of the fire. Determine the amount and intensity of monitoring needed to successfully manage the fire and provide adequate information for post-fire evaluation (see Periodic Fire Assessment section in this guide). Balance the need for information with wilderness objectives to retain its primeval character and influence and provide outstanding opportunities for solitude (Act 1964). Minimize overflights during periods of low fire activity. Monitoring should include both fire activity and management activity. As a minimum, fire activity monitoring will include a progression map of the fire size displaying acreage increases and the dates they occur. Other activities to monitor include aircraft use, holding actions, closures, etc. This information can be used to track costs and assess impacts to wilderness.

Lookouts are an excellent resource to utilize as monitors. They can be in place for the duration of a fire event and can monitor weather data, smoke direction and visibility, as well as fire activity.

The primary tools to document the monitoring effort are the fire progression map, the Periodic Fire Assessment (Part 1: Re-Validation Checklist), and the wilderness fire data table. Other monitoring tools include the Wildland Fire Use Observation Record Form and radio logbooks to construct chronologies of fire events. The Wildland Fire Use Record form is the recommended format to document fire severity. Working copies of all forms may be found in the back of this guidebook.

The wilderness fire data table is updated weekly as part of the district and forest situation reporting procedures (NICC 1997). All wilderness fires, however managed, are entered into the data table. The data table is an excellent source of forest(s) and regional activity. Each forest sends their weekly updates to the regional coordination center where all forest data tables are combined and redistributed to the forest(s).

Ongoing monitoring of cumulative effects resulting from concurrent wildland fire activity in the Anaconda Pintler Wilderness will be conducted by the Anaconda Pintler fire coordinator.

Holding Actions

This section identifies holding actions that may be required to maintain the fire in prescription. Identified trigger points, when reached, initiate holding actions. If the expected fire perimeter approaches the MMA boundary, the necessary counter measures should be clearly described as part of the implementation plan. Include cost estimates for implementation. An action plan with clear direction must be developed to guide the tactical deployment of resources needed to accomplish the holding action.

Minimum Impact Suppression Tactics (MIST) will be used on all holding actions. These tactics are addressed in each Forest's Fire Management Plan.



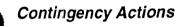
Resources Needed to Manage the Fire

Describe the organization and skills needed to manage the fire based on the expected fire projections. Also, describe the number, type, and qualifications of resources (overhead, crews, engines, helicopters, etc.) needed to monitor and implement the holding actions.

Two positions currently are mandatory to plan and implement a WFIP. A Fire Behavior Analyst (FBAN, or LTAN) is required to predict fire growth through expected normal and severe case scenarios. These projections are completed during stage III of the WFIP. A Fire Use Manager (FUMA) is assigned during the Stage I analysis. The FUMA is directly accountable to the designated line officer for implementation, coordination, and ongoing management of the wildland fire use project, fire use managers are required to have extensive experience and knowledge in representative fuel types and have successfully performed as a Complex Burn Boss.

Estimated Costs of Managing the Fire

Calculate a total cost estimate for managing the wildland fire, itemizing costs for planning, monitoring, and holding.



Contingency actions are implemented when a wildland fire use project exceeds its prescriptive elements. Items in the contingency action plan may be the foundation for the preparation of a Wildland Fire Situation Analysis (WFSA). The level of contingency planning should be commensurate with any probable threat. If severe case projections show no threat to the MMA, then elaborate contingency plans regarding access and deployment of firefighting resources are unnecessary. Detailed contingency plans are necessary when initial projections indicate a possible threat to the MMA, or when the fire's progression causes reassessment of the original assumptions and projections. A detailed contingency plan should address the following issues:

Natural barriers, area boundaries, and other ownership

- Inter/intra coordination needs
- Tactical guidelines
- Resource needs
 Implementation strategy (who, what, where, when and how)

Identify who has the decision authority to initiate a WFSA, select the appropriate suppression response, and assume command of the fire. Describe how the resources assigned to the wildland fire use project would be organized to suppression response.

Wildland Fire Implementation Plan - Stage III

Information Plan

The Wildland Fire Use Public Information Plan (Chapter 5) consists of a general information package and a list of contacts which is updated annually.

Post-Burn Evaluation

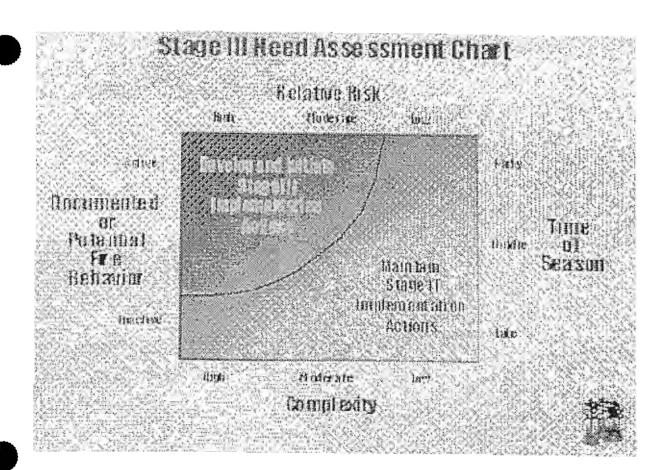
Consult Forest Service Manual 5140 for the most current reporting and evaluation requirements for wildland fires. In addition each unit has the latitude to perform field reviews as needed. The review process documents all management decisions pertinent to the fire, includes a copy of the WFIP, and develops a final incident summary comparing projections and estimates (costs, size, fire behavior, etc.). A field review to verify on-the-ground fire effects is not required; however, visiting select fires representing a range of habitat types is recommended.

When possible, the district fire manager or assistant will prepare a fire severity map for all fires 50 acres or greater. This map will be used to develop a data base of fire size and severity to carry forward research evaluating fire effects on vegetation types. Specific items to evaluate may include the following:

- 1. Summary of events, display of monitoring observations. The following items may be included and mapped out if possible:
 - a. Fire area, list acres.
 - b. Daily fire projection map and estimated rates of spread.
 - c. Daily fire intensity observations.
 - d. Crown fire area, list acres and % of area.
 - e. Lethal underburn, list acres and % of area.
 - f. Nonlethal underburn, list acres and % of area.
 - g. Unburned area within fire perimeter, list acres and % of area.
 - h. Estimated fuel consumption.
 - i. Estimated smoke production (based on estimated fuel consumptions)
 - i. Summary of weather patterns, list averages and extremes as needed.
- 2. Validation of fire behavior projections.
- 3. Holding forces used to keep fire within prescription.
- 4. Cost estimates.
- 5. Smoke impact estimates.
- 6. Trail closure impacts.
- 7. Impacts on public and private property in/out of the wilderness.
- 8. Evaluations of key decisions made during the life of the fire.
- 9. Impact to structures and trail system within wilderness.
- 10. Summary of monitoring field trip if one occurred.

A fire severity map, a daily progression map with the associated weather data, would be the minimum package for long-term documentation and evaluation needs and should include a summary statement. This statement describes the relationship of the risk assessment and fire

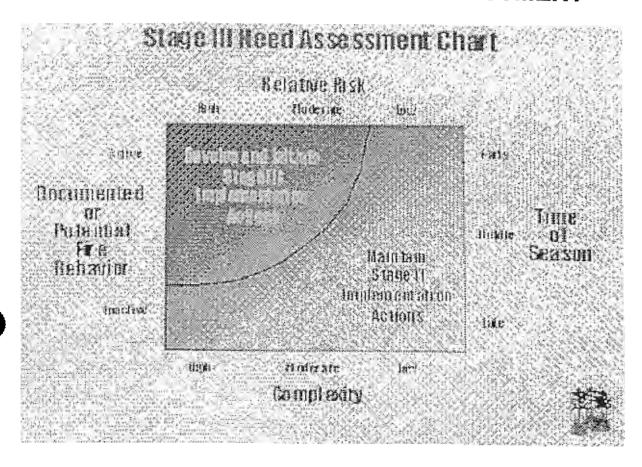
projections to the implemented actions within MMA. This summary combines the elements of the wildland fire use project and Stage III, and provides rationale for establishing the MMA based upon mitigation of the identified risks. Document the WFIP Analysis Team members in this section.



PERIODIC FIRE ASSESSMENT PART 1: RE- 'ALIDATION CHECKLIST

Decision Element	Yes	No
Is there a threat to life, property, or that resources that cannot be mitigated?		
Are potential effects on cultural and natural resources outside the range of acceptable effects?		
Are relative risk indicators and/or risk assessment results unacceptable to the appropriate Agency Administrator?		
Is there other proximate fire activity that limits or precludes successful management of this fire?		
Are there other Agency Administrator issues that preclude wildland fire use?		
Do expected management needs for this fire exceed known capabilities?		

PERIODIC FIRE ASSESSMENT PART 2: STAGE III NEED ASSESSMENT



SIGNATURE TABLE			
Name/Title	Date	Y/N	Y/N/NA
		-	
		_	<u> </u>
			-
		+	
			1
		 	
			-
Assessment Frequency			1
Valid Date(s)			-
valiu Dale(3)			





Instructions for Completing Periodic Fire Assessment

The Periodic Fire Assessment is a process to prevent the unchecked escalation of an individual fire situation or the total fire management situation without evaluation and adequate planning. Part 1 evaluates the capability to continue implementation of the appropriate management response to this fire for achieving resource benefits for a specified period following the assessment i.e., the next 24 hour period or longer, depending upon fire weather and fire behavior forecasts or other anticipated conditions. This assessment will be completed and periodically reviewed for validity. The "assessment frequency" box on page 1 specifies the frequency of assessing the particular fire. Assessment frequencies will be set by the local unit but are recommended to range from every day to every ten days depending upon the fuel type and geographic location of the fire. Recommendations for minimum assessment frequency include the following: grass fuel types = daily; shrub and timber fuel types = every 1-5 days; Alaska = every 1-10 days.

The "valid date(s)" box is inclusive of those dates where the assessment remains valid, as indicated by the dated signature. When any decision elements change from "no" to "yes", a new checklist must be completed for documentation purposes. A "yes" response to any element on the Part 1 checklist indicates that the selected appropriate management response is not accomplishing or will not accomplish desired objectives and that a new strategic alternative should be developed immediately through the use of a WFSA.

The Periodic Fire Assessment, Part 2 is a process that must be completed periodically for all wildland fires managed for resource benefits that do not have a completed WFIP Stage III. For isolated ignitions in fuel-limited situations, Part 2 does not have to be completed. When completing Part 2 of this checklist, if the chart indicates that WFIP Stage III is needed, it must be prepared within 24 hours.

When units establish monitoring and assessment frequency, it may be appropriate to develop a "step-up" system based on fire size or levels of fire activity. Then, as an individual fire gets larger or becomes more active, the monitoring and assessment frequency can correspondingly increase. Conversely, as fire activity lessens and fire size increases become less common, monitoring and assessment can "step-down" and become less frequent. Units must identify standards and rationale for establishing assessment frequency, especially "step-up" and "step-down" actions. If fire size is used as a determinant, then past burning rates should be used to formulate standards. If fire activity is used, then levels of burning (acres per day, etc.) must be definable and justifiable. The Agency Administrator or delegated individual must sign the Signature Page on the specified assessment frequency.

WILDLAND FIRE USE RECORD

WIEDEAND I IIIE OOE NECOND						
Fire Name District S.O.#						
Fire Name District S.O.# Fire Size Ignition Date Ignition Location						
Cover Type at ignition poi	Cover Type at ignition pointRecorder/Report Date Fire Suppression action taken (none, confine, contain, control)					
Fire Suppression action to	aken (none, c	onfine, contair	n, control)			
		y Severity Cla				
Vegetative Cover Type	Crown	Lethal	Nonlethal		T-1-1	
Vegetative cover Type	Fire	Underburn	Underburn	Acres Unburned	Total	
		Griderbarri	Onderbuin	Onburned	Acres	
			·	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
				V CONTROL		
Total acres burned in						
each severity class			9			
cucii ceventy ciace		L			40 (0.00)	
Give a narrative description	n of fire char	acteristics obs	served. For e	xample, was ti	ne fire	
predominately a backing o	or head fire?	What were the	e predominate	e surface fuels	affecting fire	
growth? Did the fire leave	patches of u	inburned vege	etation? What	t weather facto	rs accounted	
for most of fire growth? Indicate whether ground or aerial observations were the source of this						
information.						
Map daily growth and final	perimeter on	a 7.5" topo.	map. Quad N	lame		
DI -1 (1) - (-1) - (-1)	udala o a del de	. .				
Photos of the following pro						;
shots showing burning pate location of available photos		pes burned.	riease descri	ibe type, nu mt	er, and	
location of available priotos.						

WILDLAND FIRE USE OBSERVATION RECORD

Date: Management Unit: Current Fire Size: Observation Location: Ittach current map indicating active fire perimeter, spread direction, and of degetation type/fuel model (of area burned) Fire Activity (narrative description of fire spread, perimeter grown of the spread direction) Projected fire activity (based on forecasted weather and change of the spread direction) Projected fire activity (based on forecasted weather and change of the spread direction) Projected fire activity (based on forecasted weather and change of the spread direction) Projected fire activity (based on forecasted weather and change of the spread direction) Projected fire activity (based on forecasted weather and change of the spread direction)	wth, & relative in	ntensity)
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moke dispersal, including both plume trajectory and subside	ges in topograph	y and fuels)
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pecial concerns/threats and/or recommendations		
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pecial concerns/tireats and/or recommendations		
ttach weather observation/fire behavior observations with location/eleval		
cord these observations. Units may prefer to use their own.	on there are	
Prepared by:	on - there are seve	ral tally sheets to
lame, title, qualification Reviewed by:	on - there are seve	ral tally sheets to
lame, title, qualification		ral tally sheets to

FIRE INFORMATION FOR STATE OF THE WILDERNESS REPORT

Fire Name:			Number:
Location:			Date:
Criterion number co in the R1 wildernes	orresponds to reason for not imple s fire data table.	menting wildla	and fire use (WHY column)
1. Person Cause	d Indicators:		
2. Threat to Bour	ndary Explain:		
O Thursday 116	Dronoute Final		
3. Threat to Life of	or Property Explain:		
		<u> </u>	· · · · · · · · · · · · · · · · · · ·
4. Activity Level	National Preparedness Level	Pogiono	I Proparadness I avai
4. Activity Level	Local Situation	negiona	l Preparedness Level
	Local Olluation		
5. Fire Potential	3-day ERC at		weather station is
G. The Folendar	Weather record mean	80th %ile	KBDI
	season trend		NDDI
6. Air Quality E	xplain:		
7. Funding Expl	ain:		
8. Line Office Dis	cretion Explain:		
9. Other Explain			
1			

Instructions for completing Fire Information for SOW Report Form

Wilderness program monitoring requires that impacts of management activities on the wilderness resource be reported annually (USDA, 1992b). The State of the Wilderness Report documents reasons for wildfire declaration within wilderness; this data is extracted from the R1 wilderness fire data table. The prescription criteria, forming the initial decision analysis have been reworded in WFIP and an additional stage added prior to making a wildfire declaration. The wildfire declaration should be documented ("why" column in the wilderness fire data table) for wilderness fire reports.

- 1. **Person-caused**. Present Forest Service policy (FSM 2324.22) states that a candidate wildland fire use project must have been started by lightning. Indications which suggest that a fire may be person-caused include:
 - No lightning activity within the past two or three weeks.
 - Point of origin is near a trail or campsite, especially during hunting season.
 - No sign of a lightning strike at the fire site.

If the fire was detected by aerial patrol, often the observer can look for human activity in the area. A fire investigator may be dispatched if a fire is suspected to have been person-caused.

- 2. **Threat to Boundary**. Either initial ignition or projected fire perimeter has a high probability of crossing FMU area boundary. Rationale for determining that the fire was a threat to boundary is a part of the risk assessment that occurs in each stage of the wildland fire implementation process.
- 3. Threat to Life or Property. Either initial ignition or projected fire perimeter has a high probability of impacting inholdings, permitted facilities, or administrative sites or structures.

Protection of human life is reaffirmed as the first priority in wildland fire management. Protection of property and natural and cultural resources is secondary to firefighter and public safety (U. S. Departments of Interior and Agriculture 1995). In the event that resources are committed to a wildland fire, safety of the personnel becomes the first priority for management of that fire.

Indications that campsites are occupied can be monitored by air, and contacts can be made by wilderness rangers. Outfitter itineraries provide Forest Service personnel the means to provide ample warning for the protection of life and property of permittees and their clients under forecast conditions.

General areas within which an ignition may pose a threat to protected property under specified conditions have been identified on the fire plan map. In response to the interagency fire policy review, structure protection will be based on estimates of suppression costs commensurate with values to be protected (U. S. Departments of Interior and Agriculture 1995). Site protection plans provide specific guidance regarding structure defensibility under various conditions and commensurate resource needs to protect structures. Included are reasonable cost estimates to implement the plans. Document mitigating factors (e.g. wet season, late in

season, NDVI greenness, fuel loading and arrangement) which support wildland fire use declaration in risk zones. Document factors which support wildfire declaration.

Forest Service officials shall avoid giving the agency the appearance of being prepared to serve as a structure fire suppression organization (FSM 5138.2). Forest Service personnel shall limit structural fire suppression actions to exterior attack. (FSM 5138.3).

4. Activity Level. Concurrent wildland fire activity on the Forest, in the region, or nationally makes it improbable that management and holding forces are or will be available to manage the fire.

National Preparedness Levels IV and V no longer preclude the ability to declare wildland fire use project, however Regional level agency representatives must concur with the local unit recommendation for wildland fire use in Level IV, and National level representatives must concur with the Regional recommendation for wildland fire use in Level V. The goal is to permit individual unit fire management plans to operate while still acknowledging the importance of each decision to the national situation (FFALC 1995). Evaluation of significant risk is made by Regional or State agency representatives in presenting wildland fire use implementation proposal to Geographic Area MAC Group prior to prescribed fire approval (National Interagency Mobilization Guide, 1996).

Once an ignition is declared a wildland fire use project, it is considered on an equal basis with concurrent wildland fire activity for allocation of resources. When multiple ignitions occur but cannot all be managed for wildland fire use, prioritization due to fire regime type or other consideration should be documented here.

5. **Fire Potential**. Initial ignition exceeds prescription or projected fire has a high probability of breaching the FMU boundary. Evaluations of the fire potential are considered in each stage of the WFIP. The information gathered for determining that the fire was a threat to boundary is a part of the risk assessment that occurs in each stage of the wildland fire implementation process.

If a new ignition falls within an existing MMA and the burn plan analysis documents that no new starts would be considered as a wildland fire use project, the appropriate management response will be initiated on the new ignition.

6. Air Quality. Either initial ignition, numbers of ignitions, or projected fire activity will adversely impact air quality inside or outside of the FMU area.

The Environmental Protection Agency (EPA) recently set policy which does not excuse wildland prescribed fires from exceeding national ambient air quality standards (NAAQS) for PM-10 (particulate matter having a nominal aerodynamic diameter less than or equal to 10 microns) (EPA 1996). Even more recently, the EPA issued standards for PM 2.5 and ozone to take effect September 1997 (USDA 1997). The implementation time line proposed by the EPA calls for PM 2.5 monitors to be in place nationwide by 1998 to 2000. The EPA will develop broader guidance in the near future to address issues raised by smoke emissions from

wildland prescribed fires and other policy issues surrounding prevention of significant deterioration, conformity, visibility protection programs and regional haze.

7. **Funding**. The Wildland Fire Management appropriation will fund Wildland Fire. Wildland Fire is from unplanned ignitions. Natural ignitions that pose significant threat to resources will also receive emergency suppression responses. Natural ignitions that offer resource benefits will receive a graduated response based on approved plans. Funding for managing natural ignitions for resource objectives has been moved from preparedness to operations. Under the new appropriation, the Federal firefighting agencies do not cross-bill each other for personnel or resources used in wildland fire.

The Forest Service will use three fund codes to track Wildland Fire management funds. We will continue to use WFSU (Wildland Fire Suppression), as before, for emergency suppression responses. This work will be recorded using "P" codes (WFSU PF12). Wildland fire managed for resource objectives (natural ignition) will use the same fund code but record the work with a "G" code that permits tracking of resource benefit target accomplishments (WFSU PF241). Funding will be defined by the elements and actions associated with the site specific burn plan; the appropriate level of consultation will be initiated with the Regional Fire Use Specialist.

8. Line Officer Discretion. Line officer has other issues or concerns that preclude approval of a wildland fire use project.

The previous seven criteria address known factors which might adversely affect the outcome of a wildland fire use project. If the District Ranger or Forest Supervisor identifies additional concerns, these should be documented here and carried forward as issues for discussion at Anaconda Pintler Wilderness fire working group meetings.

Documentation of the appropriate management response also applies in the situation when Preparedness Levels elevate recommendation consultation to the Regional or National Levels, and the agency administrator/line officer does not concur with the recommendation for wildland fire use project wildland fire use project. If a perception of significant risk exists at the Regional or National level which was not identified at the local level, reassessment of risk identification measures should be carried forward for discussion at the next scheduled Anaconda Pintler Wilderness fire working group meeting. If the need for appropriate management response is the result of a regional or national moratorium on wildland fire use, document decision element 8 on the SOW report form and include these comments as a permanent record in the wilderness fire data table.

9. Other. Specify.

In areas outside wilderness, forest plan direction for the management area in which the ignition occurs may place limits on the type or amount of fire which is acceptable. Document constraints, and monitor documentation for patterns which may develop. As new sources of risk are identified, they will be evaluated for inclusion in the data by the Anaconda Pintler Wilderness fire working group.

STRUCTURE EVALUATION WORKSHEET

			(1 of	<u>)</u>		
Roof: construction type/	condition					
Siding: material/conditio	n					
Heat traps: gables/decks						
Foundation: type/materia	l/condition					
Windows: exposed/cover	red/type				keteria.	
Overhead lines: power/ph	none/shutoffs					
Underground lines: powe	r/phone/shutoffs					
Fuel storage: type/quantit	ty/lines/shutoffs					
Outside combustibles: wo	ood piles/fences/	yard accumu	ılation			Both Control of the C
Septic tank/location:			· · · · · · · · · · · · · · · · · · ·			
Septic tank/location:			· · · · · · · · · · · · · · · · · · ·			
Septic tank/location:			· · · · · · · · · · · · · · · · · · ·			
Septic tank/location: Position on slope:			· · · · · · · · · · · · · · · · · · ·			
Septic tank/location: Position on slope: Working space - minimum Slope percentage Level to 20% 21% to 40%	u clearance guide Uphill 100 ft. 150 ft.	e:	Sides 100 ft. 150 ft.		Downhill 100 ft. 150 ft.	
Septic tank/location: Position on slope: Working space - minimum Slope percentage Level to 20% 21% to 40% 41% to 60%	u clearance guide Uphill 100 ft. 150 ft.	e:	Sides 100 ft. 150 ft.		Downhill 100 ft. 150 ft.	
Septic tank/location: Position on slope: Working space - minimum Slope percentage Level to 20% 21% to 40% 41% to 60%	u clearance guide Uphill 100 ft. 150 ft.	e:	Sides 100 ft. 150 ft.		Downhill 100 ft. 150 ft.	
Septic tank/location: Position on slope: Working space - minimum Slope percentage Level to 20% 21% to 40% 41% to 60%	uphill 100 ft. 150 ft. 200 ft.	e: Actual	Sides 100 ft. 150 ft. 200 ft.		Downhill 100 ft. 150 ft. 200 ft.	

SITE EVALUATION WORKSHEET

SITE:		LEGAL:				
Factors influencing rate of spread:						
SlopePositi	on on slope	Aspec	t	Fuel m	nodel	
Fuel continuity	La			-		
Remarks:						
Resources:						
Water supply (type and capacit	y)					
Equipment on site						
A!labla barriara						
Access/egress:						
Road (width, grade, condition, t	oridges, etc.)			-		
Trails						
A tour Audio						
Helispot		.,	4.0-1-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0			
Boat						
Occupancy (number, type, duration,						
Identified Protection Level:						
1. No protection						
•	on concurrent with threater	nina fire				
	ut concurrent with threater	•				
	r system protection concur	•	atenina fire			
	rops concurrent with threa		J			
	ment for fireline construction		with threate	nina fire		
	ovement pretreatment fuels				ire event	
a. Fuels red	•					
	e material movement (fire	wood, fuel, etc	c.)			
	building materials	,	,			
Probability of success:						
	Flame length	0-2'	2-4'	4-6'	6-8'	8'+
Fair 40%+						
Good 60%+						
Excellent 80%+						
Prepar	ed by:			Date:		
(draw site map on back; attach other notes or appropria						

WILDLAND FIRE USE EVALUATION FORM

Date:
TEPS INCLUDE WAYS TO IMPROVE
yes () no
own Fire:
n-lethal Underburn:
ns:



APPENDIX D

DELEGATION OF AUTHORITY LETTERS

- Beaverhead-Deerlodge National Forest Delegation of Authority Letter
- Bitterroot National Forest Delegation of Authority Letter



WILDLAND FIRE USE CONTACT LIST

Federal Agencies

National Forests: 683-3900 Pintler R.D. 859-3211 Wise River R.D. 832-3178 Wisdom R.D. 689-3243 Bitterroot N.F. 363-7133 Sula R.D. 821-3201 Regional Fire staff: 821-3201 Rich Lasko 329-3232 Sandy Evenson 329-3401 Regional Wilderness Staff: 329-3522 Steve Morton 329-3522 Liz Close 329-3587 Bure: u of Land Management: 329-3587 Bure: u of Land Management: 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service: Big Hole Battlefield 689-3155	reueral Agencies	
Pintler R.D. 859-3211 Wise River R.D. 832-3178 Wisdom R.D. 689-3243 Bitterroot N.F. 363-7133 Sula R.D. 821-3201 Regional Fire staff: Rich Lasko 329-3232 Sandy Evenson 329-3401 Regional Wilderness Staff: 329-3522 Liz Close 329-3522 Liz Close 329-3587 Bure: u of Land Management: 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	National Forests:	
Wise River R.D. 832-3178 Wisdom R.D. 689-3243 Bitterroot N.F. 363-7133 Sula R.D. 821-3201 Regional Fire staff: Rich Lasko 329-3232 Sandy Evenson 329-3401 Regional Wilderness Staff: Steve Morton 329-3522 Liz Close 329-3587 Bure: u of Land Management: 329-3587 Burte: u of Land Management: 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Beaverhead-Deerlodge N.F.	683-3900
Wisdom R.D. 689-3243 Bitterroot N.F. 363-7133 Sula R.D. 821-3201 Regional Fire staff: Rich Lasko 329-3232 Sandy Evenson 329-3401 Regional Wilderness Staff: Steve Morton 329-3522 Liz Close 329-3587 Bure u of Land Management: 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Pintler R.D.	859-3211
Bitterroot N.F. 363-7133 Sula R.D. 821-3201 Regional Fire staff: Rich Lasko 329-3232 Sandy Evenson 329-3401 Regional Wilderness Staff: Steve Morton 329-3522 Liz Close 329-3587 Bure u of Land Management: Butte, District Office 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Wise River R.D.	832-3178
Sula R.D. Regional Fire staff: Rich Lasko Sandy Evenson Sandy Evenson Steve Morton Liz Close Sulte, District Office Dillon, Resource Center Federal Aviation Administration U.S. Fish and Wildlife Service Sulte R.D. 821-3201 821-3201	Wisdom R.D.	689-3243
Regional Fire staff: Rich Lasko 329-3232 Sandy Evenson 329-3401 Regional Wilderness Staff: Steve Morton 329-3522 Liz Close 329-3587 Bure u of Land Management: Butte, District Office 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Bitterroot N.F.	363-7133
Rich Lasko Sandy Evenson Regional Wilderness Staff: Steve Morton Liz Close Sutte, District Office Dillon, Resource Center Federal Aviation Administration U.S. Fish and Wildlife Service Way-5225 (Helena) NOAA, National Weather Service US Park Service:	Sula R.D.	821-3201
Sandy Evenson 329-3401 Regional Wilderness Staff: Steve Morton 329-3522 Liz Close 329-3587 Bure u of Land Management: Butte, District Office 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Regional Fire staff:	
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Steve Morton 329-3522 Liz Close 329-3587 Bure u of Land Management: Butte, District Office 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Sandy Evenson	329-3401
Liz Close 329-3587 Bure u of Land Management: Butte, District Office 494-5059 Dillon, Resource Center 363-2337 Federal Aviation Administration 1-800-632-4810 U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Regional Wilderness Staff:	
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Dutte, District Office Dillon, Resource Center Federal Aviation Administration U.S. Fish and Wildlife Service NOAA, National Weather Service US Park Service: 494-5059 363-2337 1-800-632-4810 449-5225 (Helena) 449-5225 (Helena)	Liz Close	329-3587
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U.S. Fish and Wildlife Service 449-5225 (Helena) NOAA, National Weather 449-5204 Service (Helena) US Park Service:		363-2337
NOAA, National Weather 449-5204 Service (Helena) US Park Service:	Federal Aviation Administration	1-800-632-4810
NOAA, National Weather 449-5204 Service (Helena) US Park Service:	U.S. Fish and Wildlife Service	449-5225
Service (Helena) US Park Service:		(Helena)
Service (Helena) US Park Service:	NOAA, National Weather	449-5204
		(Helena)
	US Park Service:	
	Big Hole Battlefield	689-3155

Montana State Agencies

Williana State Agentics	and the second s
Montana Department of Fish, Wildlife &	
Parks:	
Gary Hammond	683-4549
Mike Frisina	782-2060
Lyn Neilson	961-4670
MDFW&P (Missoula)	542-5500
Department of State Lands:	
Ravalli	363-1585
Anaconda	563-6078
Missoula	542-4290
Air Quality Bureau (Helena)	444-4354
Aeronautics Division, Dept. of Commerce	444-2506
(Helena)	



Highway Dept:	
Hamilton	363-4477
Phillipsburg	859-3932
Highway Patrol	(800)525-5555

City/County Governments

Ravalli Co. Sheriff	363-3033
Ravalli Co. Commissioners	363-6200
Ravalli Co. Rd. Dept.	363-2733
Silver Bow Co. Sherriff	782-4224
Silver Bow Co. Commissioners	723-8262
Beaverhead Co. Sheriff	683-2383
Beaverhead Co. Commissioners	683-5245
Granite Co. Sheriff	859-3251
Granite Co. Commissioners	859-3771
Deerlodge Co. Sheriff	846-2711
Deerlodge Co. Commissioners	563-8421

Airshed Coordinators

04 Jack Kirkendall, Bitterroot NF	363-7135
05 BLM, Butte	494-5059
07 Judy Crandall, Beaverhead NF	683-3975

Others

MT Wilderness Assoc., Louise Bruce, Pres	683-6437
Airport, Hamilton	363-3833
Marcus Daly Hosp. Emergency Room	363-2211
Ravalli Co. Ambulance	363-3033

SULA RANGER DISTRICT

Commercial Operations

Commercial operations	
Broad Axe Lodge	821-3878
Lost Trail Hot springs	821-3574
Rocky Knob Lodge	821-3520
Camp Creek Inn	821-3508
Sula Store	821-3364
Sula Post Office	821-3852

E-2



East Fork Residents

Bill Dowden	821-3067
El Foss	821-3526
Phyllis Freisen	821-4326
Bob Metcalf	821-3542
Bud Hansen	821-3765
Red Hamilton	821-3432
Marvin Hamilton	821-3432
Jack Joem	821-4726
Bob Wetzsteon	821-3562

PINTLER RANGER DISTRICT

Special-Use Permits

Jim Weaver	721-4009
(Cabin, Inholding, patented mining claim head	
end of Copper Ck.)	
R-Y Timber, Daron Duncan (formrly Dennis	266-3111
Washington Properties)	
Dept. State Lands: Fire	563-7944
Dept. State Lands: Other	563-6078

Adjacent Landowners

Adjudent Editaennier	
Fred Belinger (Moose Lake)	859-3493
George McArthur (work)	919-629-2131
(Senate Mine) (home)	919-824-1620
Helen Dowdall (Senate Mine)	563-2744

Outfitters

	
Vaughn Esper - Wildskies	859-3000
Bob Hoge	

WISE RIVER RANGER DISTRICT

Special-Use Permits

Billy Stockton	723-7685
Sundance Lodge	689-3611
Russ Smith	859-3948
Lance Stanchfield	832-3152
Wilder. Ventures Jackson Hole	(307) 733-2122





Buzz Kirkpatrick	689-3638
Harry Humbert	689-3637
Palisades-Gunnar Kalsta	835-3301
Don Smith	835-3291
Lee kirkpatrick	832-3167
Ernie Bacon	689-3615
Bert Bacon	689-3616
John Anderson	689-3618
John Reinhart	832-3141
Deanne Roush	832-3154
Chuck Halvorson (Camp Arcola)	494-8416
Wise River Volunteer Fire Dept.	832-3366

WISDOM RANGER DISTRICT

Special-Use Permits

Kim Bacon, Bacon Ranch	689-3634
Pete Peterson, Arrow Ranch	689-3631
(Dreise Ranch now part of the Arrow)	
Blanche Buck, Buck Ranch	689-3164
(was the Spannuth Ranch)	
Carl Lewis (was the Wildwood Land & Cattle	689-3139
Co.)	
Leon Coon	689-3175
Vaughn Esper - Wildskies	859-3000

Deep Creek Residents

Deep Creek Headenia	
Frank Gardner	832-3158
Jack Hancock	832-3157
James Harrington	832-3189
Allan Howe	832-3381
Larry Jaeger	832-3319
Paul Olson	832-3164
Chris Spolar	832-3241
Al Street	832-3277
Jim Street	832-3314
Ray Tillman	832-3204
Gene Thompson	832-3151
Giorio Titotti po cit	

Mining Claimants

Richard Walch	728-6411
Thomas Wheatley	728-6542



APPENDIX F JOB HAZARD ANALYSIS

U.S. Department of Agriculture	1. WORK PROJECT/ACTIVITY	2. LOCATION	FS-6700-7 (2/98)
Forest Service	Wildland Fire Use	Various	BDF & BRF
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12	4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED
(Instructions on Reverse) 7. TASKS/PROCEDURES	L. Kirkpatrick 8. HAZARDS	9. ABATEMENT ACTIONS	
*Travel to, from and on Project.	motor vehicle accidents; slippery road surfaces,soft shoulders,unimprov- ed and narrow roadways; weather darkness,smoke	Engineering Controls * Substitution Driving Defensively. Use seat belts. I briefings. Post Road Guards. Mark h preuse inspections on equipment. So Maintain communications. Provide ro Backers and chock vehicle tires. Hav	dentify road conditions during azards. Use Headlights. Perform cout roads and identify turnouts. and system map for project. Use
*Qualifications For assigned Position	lack of experience, Injuries	Workers recruited for fire assignments shall meet age, health, and physical requirements established for regular firefighting duties. (FS 5109.16) Also meet wildland fire use qualifications.	
*Briefing	lack of communications	Provide project briefing that will clarif communications, hazards, weather, a	
*Protective Clothing and equipment	injuries, burns and death	Wear Hard hat with chin strap, safety glasses, Nomex Fire resistar pants and shirts. Keep sleeves rolled down. Wear leather, lace type boots with skid resistant soles, and tops at least 8 inches high. Car drinking water and fire shelter. Wear OSHA approved firefighting gloves. wear hearing protection when working around equipment where noise level exceeds 90 dba. Wear additional protective equipment as dictated by local conditions and exposure to special equipment.	
*Hand Tool Use	injuries, rolling material	Supervisors and fellow employees shall being used and maintained in a safe and be alert to items that could create logs, rocks, etc.)	manner. Ensure proper spacing

ANACORDA PINTLER WILDERNESS FIRE MANAGEMENT GUIDELINES

APPENDIX F
JOB HAZARD ANALYSIS

*Holding/Mop Up/Patrol Crews	smoke,burns,falls,	Wear PPE's listed above. LCES, Follow Standard Fire Orders and Watch out Situations. Receive briefing from Holding and Mop Up
	back injuries, bees, posion oak,snags,	Boss. Identify hazards in work area. Flag hazards for others. Maintaining a high level of aerobic fitness is one of the best ways to
•	rolling material,eye injuries; heat stress.	protect yourself against heat stress. Drink lots of fluids before, during
	dehydration, CO poisonin g	and after work. Periodically rotate crews from work sites with high smoke levels to areas of less smoke or smoke free areas. Protective
	polooning	clothing and equipment shall be the same as required for firefighting. Maintain communications with the local district/dispatch.
*Chainsaw/Crosscut Use	injuries and death	All PPE will we worn when operating chainsaw. Use lookouts and ensure folks are in the clear when doing any falling. All operators will be certified at appropriate level for size and type of timber. If tree can not be fell, ribbon off and warn others.
*Emergency Evacuation Procedures (EEP) Communication	serious illness, injuries	1) Check radio communication when arriving on site. Have extra battries for radios. 2) Provide trauma or first-aid kit. 3) Have contact with district or dispatch; if needed set-up check-in hours, or have a relay put in. 4) Give person legal description of burn site. Locate nearest helecopter landing site and its location in relation to fire, notify district/dispatch so they will know which lifeflight to notify. 5) Identify your medical people on site.
*Fire Behavior	serious injury, death	Be aware and stay on top of current and expected fire behavior. Always have escape routes and safety zones identified and known to all personnel.
•		
*		
•		
*		
*		
10. LINE OFFICER SIGNATURE		11. TITLE 12. DATE
	,	
Previous edition is obsolete	(over)	

LIST OF PREPARERS (2000 Update)

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Beaverhead-Deerlodge National Forest Zone FMO Diane Hutton Wisdom/Wise River Ranger District, Beaverhead-Deerlodge National Forest

Chuck Stanich **Fuels Specialist** Bitterroot National Forest **AFMO** Chuck Oppegard Sula Ranger District

Bitterroot National Forest Forest AFMO Darrell Schulte Beaverhead-Deerlodge National Forest

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Beaverhead-Deerlodge National Forest

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Beaverhead-Deerlodge National Forest

LIST OF PREPARERS (1993 Update)

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Duty Station - Sula Ranger District

Zone FMO Philipsburg/Deerlodge Lindon Wiebe National Forest

Zone FMO Darrell Schulte Beaverhead/Deerlodge **National Forests**

Chuck Oppegard **AFMO** Sula Ranger District Bitterroot National Forest

Forestry Technician Wise River Ranger District Harriet McKnight Beaverhead National Forest

Fire Use Specialist Regional Office Walt Tomascak, Advisor

ACKNOWLEDGEMENTS

The following people have helped in a variety of ways. We extend our sincere thanks to one and all.

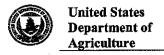
Hal Wetzsteon George Johnson Bobbi Rumbaugh Byron Bonney Van Elsbernd Peter Landres Martha Mousel Randy Doman Ron Prichard Angela Evenden Jim McNamara Mark Woods Steve Kelly Jack Losensky Sherry Christensen Dave Bunnell Thea Zakrison Liz Close Dan Svoboda Troy Kurth Ken McBride Robert Ralphs Jack Kirkendall Steve Morton Jack deGolia Dave Campbell Dave Ruppert Dick Bacon Ed Levert Jim Reid Peri Suenram Joe Wagenfehr Tom Heintz Dick Roullier Mike Ryan Lee Clark Susan Wetzsteon Patty Anderson Dennis Havig Gerry Alcock Margie Cameron Tim Gray Darrell Anderson Terry Vaughn Dixie Dies Denny Edwards Moxon Hart Sharon Frey

Amendment 19

Salmon Mountain Research Natural Area

Establishment Record

Document in permanent Forest files.



Forest Service **Bitterroot National Forest**

1801 North First Hamilton, MT 59840 (406) 363-7100

File Code:

2310

Date: January 10, 2002

Subject:

Site-Specific Travel Management Planning Priorities

To:

Regional Forester

Attached are a description and map of the Bitterroot National Forest's site-specific travel management planning priorities. This is provided to fulfill the requirements of the Off-Highway Vehicle Record of Decision signed in January 2001. If you have questions, please direct them to Sue Heald, Planning Staff Officer, at (406) 363-7142.

/s/ Jeff S. Amoss for RODD RICHARDSON Forest Supervisor

Enclosures

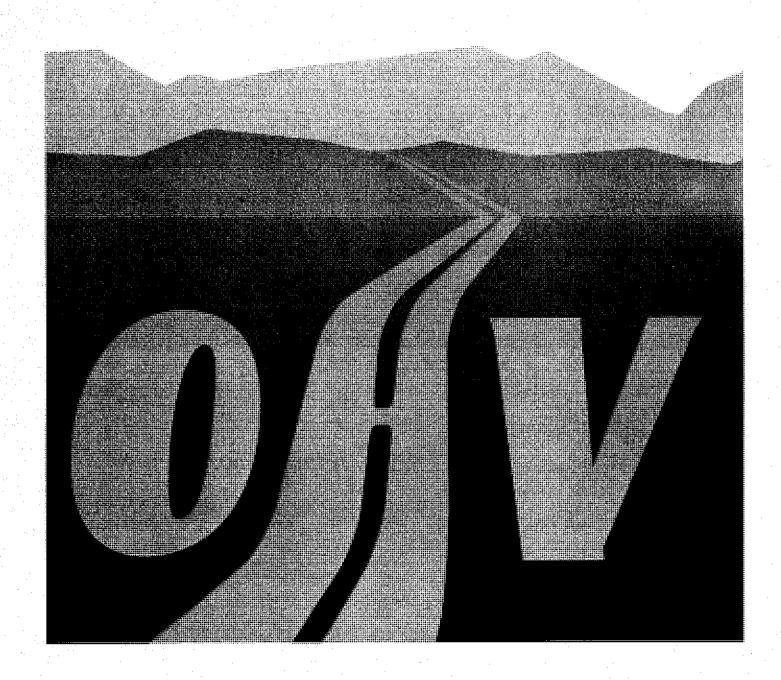


United States Department of Agriculture Forest Service Northern Region

January 2001



OFF-HIGHWAY VEHICLE RECORD OF DECISION AND PLAN AMENDMENT FOR MONTANA, NORTH DAKOTA AND PORTIONS OF SOUTH DAKOTA



RECORD OF DECISION

Amendment to Nine National Forest Land and Resource Management Plans In Montana, North and South Dakota

Management Direction Related to Off-Highway Vehicles

INTRODUCTION

The Forest Service (FS) has made a decision to the amend forest plans listed in Table 1.1. The amendment eliminates wheeled motorized cross-country travel with a few specific exceptions. The decision is based on the analysis in the Final Environmental Impact Statement (FEIS), which was prepared jointly with the Bureau of Land Management. This decision document applies to National Forest System Lands only.

Each national forest and grassland manages OHV use based on its land and resource management plan (referred to as forest plans). The Dakota Prairie Grasslands are currently covered by the Custer National Forest plan and included in that plan.

Table 1.1 FS Forest Plans

Beaverhead National Forest Plan (1986)
Bitterroot National Forest Plan (1987)
Custer National Forest Plan (1987)
(Includes Dakota Prairie Grasslands)
Deerlodge National Forest Plan (1987)
Flathead National Forest Plan (1986)
Gallatin National Forest Plan (1987)
Helena National Forest Plan (1986)
Kootenai National Forest Plan (1987)
Lewis and Clark National Forest Plan (1986)

Location of the Analysis Area

FS Northern Region in Montana, North Dakota, and portions of South Dakota administers 18.2 million acres of National Forest System (NFS) land located within nine national forests and the Dakota Prairie Grasslands. About 10 million of the 18.2 million acres of NFS lands are currently designated as available to motorized wheeled cross-country travel, either seasonally or yearlong, and would be affected by this Record of Decision (ROD). Table 1.1 displays the plans affected by this analysis. The national forests and grasslands acreage affected are listed in Table 1.2.

The scope of this analysis does not include the northern Idaho portion of the Northern Region. The north Idaho forests complicated the cooperative effort with the BLM because the whole state of Idaho falls within a different BLM administrative unit. In addition the dense forests and steeper terrain in north Idaho result in relatively fewer problems from cross-country travel by wheeled motorized OHV's.

Table 1.2		
National Forests and Grasslands	Affected Acres	Total Acres
Beaverhead-Deerlodge National Forest	1,921,000	3,352,000
Bitterroot National Forest	796,000	1,117,000
Custer National Forest	758,000	1,187,000
Dakota Prairie Grasslands*	1,260,000	1,260,000
Flathead National Forest	1,211,000	2,353,000
Gallatin National Forest	780,000	1,801,000
Helena National Forest	571,000	975,000
Kootenai National Forest	1,551,000	2,220,000
Lewis and Clark National	1,347,000	1,862,000
Forest		1
Lolo National Forest	0	2,082,000

^{*}Dakota Prairie Grasslands are currently managed in accordance with the Custer National Forest.

Background

The increased popularity and widespread use of OHV's on public lands in the 1960's and early 1970's prompted the development of a unified federal policy for such use. Executive Order (EO) 11644 was issued in 1972 and EO 11989 was issued in 1977 (Appendix A of the FEIS). They provide direction for federal agencies to establish policies and provide for procedures to control and direct the use of OHV's on public lands so as to (1) protect the resources of those lands; (2) Apromote the safety of all users of those lands; and (3) minimize conflicts among the various users on those lands. The FS developed regulations in response to the EO's (36 CFR 216, 219, and 295). Under those regulations, OHV use can be restricted or prohibited to minimize (1) damage to the soil, watershed, vegetation, or other resources of the public lands; (2) harm to wildlife or wildlife habitats; and (3) conflict between the use of OHV's and other types of recreation.

External and internal reviews have identified concerns with the FS implementation of the EO's (1995, General Accounting Office, Information on the Use and Impact of Off-Highway Vehicles; 1986, Forest Service review of its OHV program; and the 1979 Council on Environmental Quality review of Off-Road Vehicles on Public Land). These reviews have identified numerous resource concerns that would be addressed by this proposal.

The FS recognizes in their respective forest plans, policy, and manual direction, that OHV use is a valid recreational activity when properly managed. Managing this use along with other recreation uses and the need to protect natural and cultural resources has become increasingly more difficult with increased public demands.

Figure 1.1 Decision Levels for Travel Planning

Decision Level One Forest Plans

Provides direction for acceptable uses and protection measures. Identifies goals, objectives, standards and guidelines for future decisionmaking through site-specific planning.

Designates areas as closed, open, or limited/restricted to motorized wheeled cross-country travel.

Planning for units of the National Forest System involves two levels of decision (Figure 1.1). The first level, often referred to as programmatic planning, is the development or amendment of forest plans that provide management direction for resource programs, uses, and protection measures. Forest plans and associated amendments are intended to set out management area prescriptions or direction with goals, objectives, standards, and guidelines for future decisionmaking through site-specific planning. This includes the designation of areas as closed, open or restricted to motorized wheeled cross-country travel. The environmental analysis accomplished at the plan amendment level guides resource management decisions on National Forest System (NFS) lands and aids, through the tiering process, environmental analyses for more site-specific planning. This FEIS is a programmatic, forest plan level, document.

The second level of planning involves the analysis and implementation of management practices designed to achieve goals and objectives of the forest plan. This is commonly referred to as site-specific planning. It requires relatively detailed information that includes the location, condition, and current uses of individual roads and trails, and the identification of when and where individual roads and trails will be open or closed to various types of use. This step is accomplished through the site-specific planning process at the local level.

It is important for the reader to note that anytime a specific road, trail or area has considerable adverse environmental effects occurring from OHV use, the local manager has the responsibility and authority (36 CFR 295.5) to immediately close the road, trail or area to use until the problem has been resolved.

Purpose and Need

In general the need for a decision and the purpose of the decision is based on an evaluation of the existing condition compared to the desired condition. The following describes this process.

<u>Decision Level Two</u> Site-Specific Planning At the Local Level

Provides analysis of site-specific road and trail management designed to achieve goals and objectives of the forest plan.

Includes identification of when and where individual roads and trails would be open or closed to various types of use.

Purpose

The purpose of this decision is to avoid future impacts from the increasing use of OHV's on areas that are currently available to motorized wheeled cross-country travel. It amends forest plan direction to prohibit motorized wheeled cross-country travel to protect natural resource values. This would provide timely direction that would minimize further resource damage, user conflicts, and related problems associated with motorized wheeled cross-country travel, including new user-created roads, until subsequent site-specific planning is completed.

Site-specific planning would address OHV use on individual roads and trails to provide for a range of safe motorized recreation opportunities while continuing to protect resource values.

This decision does not change the current restricted yearlong or closed designations for areas. This decision does not change current road or trail designations.

Existing Condition

About 10 million of the 18.2 million acres of NFS lands are currently designated as available to motorized wheeled cross-country travel, either seasonally or yearlong (Table 1.3).

Open Open
Seasonally Yearlong Tota

During the past 10 years, OHV use and associated crosscountry travel have increased in some areas. The estimated number of vehicles used off-highway across the three-state area increased dramatically in the 1990's (Table 1.4). The increased use has resulted in environmental effects on public resources in numerous areas, including roads and trails that have developed as the result of repeated use, often referred to as user-created.

Table 1.4 Percent Increase in Estimated Number of Vehicles Used Off-Highway from 1990-1998 Across the 3-State Area *

Trucks	13%
ATV's and Motorcycles	92%

^{*}For additional information see Chapter 3, Economics Section in the FEIS.

Problems do not occur equally throughout the analysis area. Some OHV use has occurred in riparian areas and on highly erodible slopes. In other areas use is very light and little or no effects from motorized wheeled cross-country travel are evident. It is estimated that only about 1% of the wheeled motorized OHV users go cross-country when the whole analysis area is considered (chapter 3 of the FEIS). However the 1% is not evenly distributed and the cross-country use that occurs in more sensitive areas can result in damage from very low levels of use.

Increased use of OHV's has the potential to:

- spread noxious weeds,
- · cause erosion,
- · damage cultural sites,
- · create user conflicts, and
- · disrupt wildlife and damage wildlife habitat.

Monitoring of OHV travel at some National Forest and district offices indicates that problems exist where unrestricted motorized wheeled cross-country travel is allowed. Some forests or districts are presently reevaluating their existing travel management plans or developing new plans. These plans are designed to determine the appropriate use of roads and trails to provide a reasonable mix of motorized and nonmotorized recreation opportunities while protecting other resource values. Many offices have begun or completed site-specific planning.

Members of the public and other state and federal agencies have shared their concerns about unrestricted OHV travel on public lands (OHV project file).

Desired Condition

The goal of managing OHV's is to provide a range of safe motorized recreation opportunities, recognizing their legitimate use while minimizing the current or anticipated effects on wildlife and their habitat, soil, native vegetation, water, fish, cultural resources and other users (Appendix A of the FEIS). The long-term goal is that OHV use would occur on designated routes and intensive use areas to provide a variety of motorized and nonmotorized recreation opportunities. However, designation of specific routes requires local site-specific planning consistent with the forest plan. In the interim period before designation of travel routes can be accomplished, it is desirable to take the first step and restrict motorized wheeled cross-country travel. The designation of areas to the restricted yearlong category in the forest plans in the three-state area is a valuable step toward the long-term goal.

Need

In comparing the existing condition to the desired condition, it is evident that OHV use and associated effects have increased in many areas since forest plans were completed. The FS is concerned that continuing unrestricted use could potentially further increase the spread of noxious weeds, cause erosion, damage cultural sites, create user conflicts, disrupt wildlife and damage wildlife habitat. The trend of increased use is expected to continue. In order to minimize further resource damage in areas already experiencing increased activity and to avoid future impacts in areas not yet affected, management of OHV use needs to be reviewed.

Areas that are open seasonally or yearlong to motorized wheeled cross-country travel in current forest plans require a plan amendment to address these issues. The decision to manage the cross-country aspect of motorized wheeled vehicle use is part of the responsibility of public land managers to balance human use with the need to protect natural resources.

The FS Natural Resource Agenda has established a number of goals for maintaining and restoring the health, diversity, and productivity of the land, which include: protect and restore the settings of outdoor recreation; determine the best way to access the national forest or grassland; reduce impacts of the existing road system; restore watersheds; and provide an avenue to collaborate with communities, the private sector and other agencies. This decision will help address several of these goals.

DECISION

After careful consideration of the potential environmental impacts, the effectiveness in resolving the planning issues, responsiveness to public concern, and compliance with FS statutory authority and Executive Orders 11644 and 11989 it is my decision to adopt Alternative 5.

My decision amends the nine forest plans listed in Table 1.1 and establishes a new standard that restricts yearlong, wheeled motorized cross-country travel, where it is not already restricted. There are several specific exceptions to this restriction:

- Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.
- Motorized wheeled cross-country travel for the FS would be limited to official administrative business as outlined by internal memo (see Appendix D of the FEIS).
- Motorized wheeled cross-country travel for other government entities on official administrative business would require authorization from the local field manager or district ranger in their respective areas. This authorization would be through normal permitting processes and/or memoranda of understanding.
- Motorized wheeled cross-country travel for lessees and permittees would be limited to the administration of a federal lease or permit.
- Motorized wheeled cross-country travel to a campsite would be permissible within 300 feet of roads and trails.

This decision directs the forests/grasslands to prioritize areas across each unit as to whether they are high, medium or low priority for site-specific planning, based on the factors identified in Appendix B of the FEIS. The prioritization will be completed within six months of the release of this decision. High priority areas will have site-specific planning initiated no later than two years after this decision. Medium will be initiated within 5 years. No time limit is specified for the low priorities. Site-specific planning is the process that will result in the designation of roads and trails for their appropriate uses.

Approximately 3600 acres of drawdown area around Lake Koocanusa on the Rexford District of the Kootenai National Forest is excluded from this decision. The drawdown area is currently being addressed in the Rexford District Recreation Management Plan.

REASONS FOR DECISION

Alternative 5 was selected because it minimizes further resource damage, user conflicts and related problems, including new user-created roads, associated with motorized wheeled cross-country travel. The protection provided by

alternative 5 is slightly less than alternative 1 (Chapter 3 of FEIS) because it allows more administrative and other permitted uses of OHV's cross-country. However, this use would be conducted in a controlled manner, according to permit requirements, to mitigate potential adverse effects. Examples of permit requirements include the cleaning of equipment to avoid spreading invasive weeds, avoidance of threatened or endangered species habitat, timing restrictions, etc. This slight tradeoff is made in order to maintain efficient and effective management of the public's resources by allowing limited motorized wheeled cross-country travel for conducting needed work, such as prescribed fires, treating invasive weeds, conducting monitoring or research, maintaining or constructing fences, utility structures and other types of improvements.

Alternative 5 does not allow motorized wheeled cross-country travel for big game retrieval, as in alternative 2, the preferred alternative in the draft EIS. This game retrieval restriction would: reduce the conflicts between motorized and nonmotorized users during the hunting season; reduce the potential for introducing invasive weeds; reduce the potential for soil erosion; reduce the potential for impacts to wildlife; be more responsive to numerous public concerns that were expressed about the inappropriateness of allowing an exception for game retrieval; and be consistent with the long-term goal of using vehicles on designated routes. For these reasons alternative 5 was selected instead of alternative 2.

Alternative 5 allows for dispersed camping within 300 feet of a road or trail provided recreationists use the most direct route and select their site by nonmotorized means. This greater distance than in alternative 1 (50') was important particularly in areas without any developed campgrounds. This allows people to move away from the dust and noise generated on the road or trail. Agency recreation specialists expect relatively little use of this exception, as most popular dispersed campsites already have a road accessing them.

There are parts of this three-state area with relatively little damage from wheeled motorized cross-country travel as described in the FEIS. Alternative 3 excluded the Bitterroot, Kootenai and Flathead National Forests because they are relatively steep and densely vegetated which precludes the use of OHV's in many areas. I did not choose that alternative, to prevent future problems of invasive weed introductions, the development of unclassified roads and trails, potential effects on historic and cultural resources and effects on wildlife and their habitat from developing and to provide consistency of use within the analysis area and between the BLM and Forest Service.

Alternative 5 was selected instead of alternative 4 because I felt the seasonal restrictions did not provide sufficient

protection from the spread of invasive weeds, the potential for development of more unclassified (user-created) roads and trails, damage to historic and cultural resources or adequately protect wildlife and their habitat. Particularly the protection of threatened and endangered species that may be unknowingly affected by cross-country users. This same rationale was applied for not selecting the no action alternative.

This important step towards the goal of designated roads and trails will allow the maintenance of a legitimate form of recreation while the natural and cultural resources of the national forests are maintained and user-conflicts are minimized. The designation of roads and trails allows for knowledgeable monitoring and evaluation of use and the effects of use that cannot be accounted for when large expanses of land are open for cross-country use.

Alternative 5 provides specific mitigation measures consistent with the Endangered Species Act for the threatened western prairie fringed orchid in known habitat on the Sheyenne National Grassland. It provides for positive benefits for several other listed species (Appendix C of the FEIS) as well as many other species of wildlife (Chapter 4 of the FEIS), whereas the no action alternative completely lacks these protections.

This decision is consistent with the BLM's preferred alternative in the FEIS, which provides for better service to the public, since the rules are the same and will not create confusion for the users of federal public lands.

This decision and the local site-specific planning approach it prescribes is consistent with the proposed roads rule the FS recently published (36 CFR 212). It provides a process for resolving the disposition of unclassified roads, including user-created roads and trails. It moves the agency towards designated routes, which many people, organizations and other agencies have advocated.

This decision in conjunction with the existing authority for local line officers, to immediately close any areas roads or trails that are or will cause considerable adverse effects (36 CFR 295), will substantially improve the our ability to maintain the use of OHV's as a recreational activity and meet our responsibility to protect the cultural and environmental values of the national forests.

IMPLEMENTATION

This decision will take effect 7 days after publication of legal notice in each of the newspapers of record listed at the end of this document.

The actual application of the decision will be through activities on each of the forests and grasslands affected. This will include a CFR order signed by each forest/grassland supervisor eliminating cross-country travel. This will be added to the travel management maps for each forest/grassland. Signs will be posted on the major portal roads to NFS lands prohibiting cross-country travel. These orders and signs will be in place by July 1, 2001.

ALTERNATIVES CONSIDERED

This section describes the No Action Alternative and five other alternatives for management of OHV's on public lands. All alternatives comply with the National Forest Management Act (NFMA) of 1976, and are subject to compliance with all valid statutes on NFS lands. Impacts of all resources are considered through the National Environmental Policy Act (NEPA) of 1969.

Attributes Common to All Alternatives

The FS will consult in accordance with Section 7 of the Endangered Species Act (ESA) through the U.S. Fish and Wildlife Service to ensure any site-specific plan is not likely to jeopardize the continued existence of any species listed or proposed to be listed under the provisions of the ESA, or result in the destruction or adverse modification of designated or proposed critical habitat.

Through subsequent site-specific planning, the FS will designate roads and trails for motorized use. With public involvement the agencies would continue with ongoing travel management plans and develop new travel management plans (i.e., landscape analysis, watershed plans, or activity plans) for geographical areas. Through site-specific planning, roads and trails would be inventoried, mapped, and analyzed to the degree necessary to evaluate and designate the roads and trails as open, seasonally open, or closed and determine the type of vehicle. The inventory would be commensurate with the analysis needs, issues, and desired resource conditions based on forest plan objectives for the analysis area. When addressing roads, the proposed FS roads policy will be utilized (36 CFR 212).

Site-specific planning could include identifying opportunities for trail construction and/or improvement, eliminating roads/trails that are causing resource problems or adding specific areas where intensive OHV use may be appropriate. A change in area designations from restricted to open would require a plan amendment. Implementation and monitoring are described in Appendix B of the FEIS. Implementation includes prioritizing areas for site-specific planning within six months of the respective agencies' Record of Decision based on the resources in the area.

Disabled access will be allowed per the Rehabilitation Act of 1973.

No Action Alternative (Current Management)

This alternative would continue current direction and was used as the baseline condition for comparing the other alternatives. The FS would continue to manage OHV's using existing direction and regulations. It addressed a number of issues and concerns raised during scoping, such as the proposal is too restrictive and effects on the ground do not warrant any change. It also addressed the concern that it is unrealistic to provide consistent management of OHV's across a three-state area due to wide variations of issues and problems that would necessitate decisions be made at the local level.

Areas currently open seasonally or yearlong to motorized wheeled cross-country travel would remain open (Table 1.3 and Map 1 in the FEIS). The table and map reflect designations identified in existing forest plans.

Site-specific planning and enforcement of OHV regulations would occur at current levels.

Alternative 1

This is the most restrictive alternative for management of OHV's. Motorized wheeled cross-country travel would be prohibited with only a few exceptions for emergency and limited administrative purposes. This alternative was developed to address concerns that OHV use needed to be restricted quickly and was overdue because of resource impacts and user conflicts. Concerns addressed were to stop the expansion of problems associated with the spread of noxious weeds, user conflicts, wildlife harassment and habitat alteration, effects on vegetation, soils and aquatic resources, and further deterioration of FS Inventoried Roadless, Recommended Wilderness and Montana Wilderness Study Areas.

The FS would restrict motorized wheeled cross-country travel yearlong (Map 1, FEIS). These lands, approximately 10 million acres, would be designated restricted yearlong under FS regulations (36 CFR 295).

Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Motorized wheeled cross-country travel for FS official administrative business would not be allowed without prior approval by the authorized officer (district ranger).

Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would not be allowed unless specifically authorized under the lease or permit.

Motorized wheeled cross-country travel would not be allowed for the retrieval of a big game animal.

Motorized wheeled cross-country travel would not be allowed for personal use permits such as firewood and Christmas tree cutting.

The following exception would apply unless currently restricted:

Motorized wheeled cross-country travel for camping would be permissible within 50 feet of roads and trails by the most direct route after site selection by nonmotorized means. This exception does not apply where existing seasonal restrictions prohibit traveling off designated routes to a campsite.

Alternative 2

This alternative was based on the initial proposal and public comments received during scoping. It restricts motorized wheeled cross-country travel throughout the analysis area but allows some additional exceptions compared to alternative 1, for relatively infrequent activities. Similar to Alternative 1, concerns addressed were to stop the expansion of problems associated with the spread of noxious weeds, user conflicts, wildlife harassment and habitat alteration, effects on vegetation, soils and aquatic resources, and further deterioration of FS Inventoried Roadless, Recommended Wilderness and Montana Wilderness Study Areas. It meets the concern that the FS needs to allow for some exceptions for motorized wheeled cross-country travel, such as game retrieval and camping. It provides almost the same ease of enforcement and consistency between the BLM and FS as Alternative 1.

The FS would restrict motorized wheeled cross-country travel yearlong (Map 1, FEIS). These lands, approximately 10 million acres, would be designated restricted yearlong under FS regulations (36 CFR 295).

Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Motorized wheeled cross-country travel for FS official administrative business would be allowed.

Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would be allowed, unless specifically prohibited in the lease or permit. This would not change any existing terms or conditions in current leases or permits. However, this would not preclude modifying leases or permits to limit motorized wheeled cross-country travel based on further site-specific analysis.

Motorized wheeled cross-country travel for personal use permits, such as firewood and Christmas tree cutting, could be permitted at the local level (FS ranger district) at the discretion of the authorizing officer.

The following exceptions would apply unless currently restricted:

Motorized wheeled cross-country travel for camping would be permissible within 300 feet of roads and trails by the most direct route after site selection by nonmotorized means. This exception would not apply where existing seasonal restrictions prevent traveling off designated routes to a campsite.

Motorized wheeled cross-country travel by the most direct route to retrieve a big game animal in possession would be allowed only in the following field units in Montana: Custer National Forest (NF) with the exception of the Beartooth Ranger District. Motorized wheeled cross-country travel in all other areas to retrieve a big game animal would not be allowed. Through subsequent site-specific planning big game retrieval could be restricted.

The following mitigation measures for the western prairie fringed orchid would apply:

Motorized wheeled cross-country travel for FS official administrative business would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval.

Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval.

Alternative 3

This alternative is based on the premise that the agencies should not restrict OHV use where problems are limited by steep terrain and dense vegetation or where existing regulations are adequate. Lands in the Flathead, Kootenai and Bitterroot National Forests in western Montana would not be affected by this alternative. Preliminary analysis indi-

cated that even though significant amounts of federal land were open to motorized wheeled cross-country travel in western Montana, current technology of OHV's generally has limited the expansion of user-created routes because of relative steepness and dense vegetation. Concerns for the need to restrict OHV's in the remainder of the analysis area are similar to Alternative 2. Concerns addressed were to stop the expansion of problems associated with the spread of noxious weeds, user conflicts, wildlife harassment and habitat alteration, effects on vegetation, soils and aquatic resources, and further deterioration of FS Inventoried Roadless, Recommended Wilderness and Montana Wilderness Study Areas. It meets the concern that the agencies need to allow some exceptions for motorized wheeled cross-country travel, such as game retrieval and camping.

The FS would prohibit motorized wheeled cross-country travel yearlong in the Beaverhead-Deerlodge NF, Custer NF, Dakota Prairie Grasslands, Gallatin NF, Helena NF, and the Lewis and Clark NF (Map 2 in the FEIS). Approximately 6.6 million acres would be designated restricted yearlong under the FS regulations (36 CFR 295).

Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Motorized wheeled cross-country travel for FS official administrative business would be allowed.

Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would be allowed, unless specifically prohibited in the lease or permit. This would not change any existing terms or conditions in current leases or permits. However, this would not preclude modifying leases or permits to limit motorized wheeled cross-country travel based on further site-specific analysis.

Motorized wheeled cross-country travel for personal use permits, such as firewood and Christmas tree cutting, could be permitted at the local level (FS ranger district) at the discretion of the authorizing officer.

The following exceptions would apply unless currently restricted:

Motorized wheeled cross-country travel for camping would be permissible within 300 feet of roads and trails by the most direct route after site selection by nonmotorized means. This exception does not apply where existing seasonal restrictions prohibit traveling off designated routes to a campsite.

Motorized wheeled cross-country travel by the most direct route would be allowed from 10:00 a.m. until 2:00 p.m. to retrieve a big game animal that is in possession. Through subsequent site-specific planning big game retrieval could be restricted.

Alternative 4

This alternative restricts motorized wheeled cross-country travel seasonally to lessen impacts on resource values and to minimize user conflicts. Motorized wheeled cross-country travel would be restricted to times of the year when the ground is generally frozen (December 2 to February 15) or during dryer periods (June 15 to August 31) to reduce soil and vegetation impacts, aquatic resource damage, and to minimize user conflicts. No motorized wheeled crosscountry travel would be allowed during big game hunting seasons in all three states, with the exception of game retrieval, to minimize user conflicts and wildlife harassment. Game retrieval would be allowed in all open areas of the analysis area. It meets the concern that the agencies need to allow some exceptions for motorized wheeled crosscountry travel, such as game retrieval and camping. It provides almost the same ease of enforcement and consistency between the two agencies as Alternative 1 because the timing and exceptions are the same throughout the threestate area.

The FS would restrict motorized wheeled cross-country travel seasonally (Map 1, FEIS). These areas would be open to motorized wheeled cross-country travel from June 15 to August 31 and from December 2 to February 15. These lands, approximately 10 million acres, would be designated limited or restricted seasonally under FS regulations (36 CFR 295).

Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Motorized wheeled cross-country travel for FS official administrative business would be allowed.

Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would be allowed, unless specifically prohibited in the lease or permit. This would not change any existing terms or conditions in current leases or permits. However, this would not preclude modifying leases or permits to limit motorized wheeled cross-country travel based on further site-specific analysis.

Motorized wheeled cross-country travel for personal use permits, such as firewood and Christmas tree cutting, could be permitted at the local level (FS ranger district) at the discretion of the authorizing officer. The following exceptions would apply unless currently restricted:

Motorized wheeled cross-country travel for camping would be permissible within 300 feet of roads and trails by the most direct route after site selection by nonmotorized means. This exception does not apply where existing seasonal restrictions prohibit traveling off designated routes to a campsite.

Motorized wheeled cross-country travel by the most direct route would be allowed to retrieve a big game animal that is in possession. Through subsequent site-specific planning big game retrieval could be restricted.

Alternative 5 (Preferred Alternative)

This alternative was developed in response to comments on the DEIS from the public and other agencies. It restricts motorized wheeled cross-country travel throughout the analysis area to protect riparian areas, wetlands, crucial wildlife habitat, threatened or endangered species, soils and vegetation, aquatic resources, and to reduce user conflicts. The alternative addresses the concern that the agencies need to allow an exception for camping, but includes specific limitations on that exception. This alternative would limit travel for administrative use by the FS, other government entities, and lessees and permittees, but would allow motorized wheeled cross-country travel when necessary.

The FS would restrict motorized wheeled cross-country travel yearlong (Map 1, FEIS). These lands, approximately 10 million acres, would be designated restricted yearlong for motorized wheeled cross-country travel under FS regulations (36 CFR 295).

The FS recognize there are some valid needs for motorized wheeled cross-country travel. The following outlines the needs for motorized wheeled cross-country travel allowed in this alternative.

Motorized wheeled cross-country travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Motorized wheeled cross-country travel for the FS would be limited to official administrative business as outlined by internal memo (see Appendix D of the FEIS). Examples of administrative use would be prescribed fire, noxious weed control, revegetation, and surveying. Where possible, agency personnel performing administrative functions would locate a sign or notice in the area they are working to identify for the public the function they are authorized to perform. Motorized wheeled cross-country travel for other government entities on official administrative business would require authorization from the local field manager or district ranger in their respective areas. This authorization would be through normal permitting processes and/or memoranda of understanding. Some examples of other agency administrative use would be noxious weed control, surveying, and animal damage control efforts. Where possible, the authorized party performing administrative functions would locate a sign or notice in the area they are working to identify for the public the function they are authorized to perform.

Motorized wheeled cross-country travel for lessees and permittees would be limited to the administration of a federal lease or permit. Persons or corporations having such a permit or lease could perform administrative functions on public lands within the scope of the permit or lease. However, this would not preclude modifying permits or leases to limit motorized wheeled cross-country travel during further site-specific analysis to meet resource management objectives or standards and guidelines. Some examples of administrative functions include, but are not limited to:

- Gas or electric utilities monitoring a utility corridor for safety conditions or normal maintenance,
- Accessing a remote communication site for normal maintenance or repair,
- Livestock permittees checking vegetative conditions, building or maintaining fences, delivering salt and supplements, moving livestock, checking wells or pipelines as part of the implementation of a grazing permit or lease, and
- Scientific groups under contract for resource assessments or research.

Motorized wheeled cross-country travel for personal use permits, such as firewood and Christmas tree cutting, could be allowed at the local level (FS ranger district) in specific areas identified for such use. In all other areas, motorized wheeled cross-country travel associated with personal use permits would not be allowed.

Motorized wheeled cross-country travel for big game retrieval would not be allowed.

The following exception would apply unless currently restricted:

Motorized wheeled cross-country travel to a campsite would be permissible within 300 feet of roads and trails. Site selection must be completed by nonmotorized means and accessed by the most direct route causing the least damage. This exception does not apply where existing seasonal restrictions prohibit traveling off designated routes to a campsite. Existing local rules take precedence over this exception. This distance could be modified through subsequent site-specific planning.

The following mitigation measures for the western prairie fringed orchid would apply:

Motorized wheeled cross-country travel for FS official administrative business would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

Motorized wheeled cross-country travel for lessees and permittees to administer federal leases or permits would not be allowed in known western prairie fringed orchid habitat on the Sheyenne National Grassland in eastern North Dakota without prior approval so as to eliminate impacts to occupied habitat.

Table S.1 Summary of Alternatives

Management	No Action (Current Management)	Alternative I	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
Areas open yearlong or seasonally	Areas currently open	None	None	Flathead NF, Kootenai NF and Bitterroot NF	Open 6/15 to 8/31 and 12/2 to 2/15 in all areas currently open	None
Prohibits motorized wheeled cross-country travel	No	Yes	Yes	Yes, except in Flathead NF, Kootenai NF and Bitterroot NF	Restricted seasonally	Yes
Emergency use	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
Administrative use	Allowed	Authorization required	Allowed	Allowed	Allowed	Allowed as outlined by internal memo
Lease and permit holders	Allowed	Not allowed unless specifically authorized	Allowed unless specifically prohibited	Allowed unless specifically prohibited	Allowed unless pecifically prohibited	Allowed unless specifically prohibited
Exceptions for Motorized Wheeled Cross-Country Travel						
- Camping	Allowed	Within 50 feet of roads and trails by the most direct route	Within 300 feet of roads and trails by the most direct route	Within 300 feet of roads and trails by the most direct route	Within 300 feet of roads and trails by the most direct route	Within 300 feet of roads and trails by the most direct route
- Game retrieval	Allowed	Not allowed	Allowed by the most direct route in portions of eastern Montana.* Not allowed in other areas. Could be modified in site-specific planning	Allowed from 10 a.m. to 2 p.m. by the most direct route Could be modified in site-specific planning	Allowed by the most direct route Could be modified in site-specific planning	Not allowed. Retrieval would be allowed on roads and trails unless currently restreicted.
- Disabled access	Allowed per Rehabili- tation Act	Allowed per Rehabili- tation Act	Allowed per Rehabilitation Act	Allowed per Rehabili- tation Act	Allowed per Rehabili- tation Act	Allowed per Rehabili- tation Act
- Firewood and Christmas tree cutting	Specified by permit	Not allowed	Specified by permit at the local level	Specified by permit at the local level	Specified by permit at the local level	Specified by permit at the local level

^{*} Game retrieval is allowed in Montana only in the following field units: Miles City FO, Billings FO, Malta FO, Lewistown FO with the exception of the Great Falls Field Station, and Custer NF with the exception of the Beartooth RD.

Table S.2 Summary of Environmental Consequences

Alternative 5 (Preferred Alternative)		User conflicts associated with cross-country travel would be substantially reduced.	Motorized users would have access to roads and trails. Cross-country travel eliminated.	Recreation experience would improve.	Additional disturbances to visuals would be substantially reduced.	This alt, would enhance the protection of the naturalness of these areas.		No opportunity would be available to substitute motorized wheeled cross-country travel for activities that require more mobility. There is no clear evidence this is what people will choose to do as they age.
Alternative 4		Effects under No Action Alt. would apply from 6/15-8/31 and 12/2-2-15. Effects under Alt. 2 would apply during other time periods.	Same as above.	Same as above.	Same as above.	Seasonal motorized wheeled cross-country travel may have an effect on the naturalness of these areas.		Opportunity would be available from 6/15-8/31 and 12/2-2/15 to substitute motorized wheeled cross-country travel for activities that require more mobility. There is no clear evidence this is what people will choose to do as they age.
Alternative 3		Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action would apply elsewhere.	Same as above,	Same as above.	Same as above.	Same as above.		Opportunity would be available in some areas to substitute motorized wheeled eross-country travel for activities that require more mobility. There is no clear evidence that this is what people will choose to do as they age.
Alternative 2		User conflicts associated with cross-country travel would be substantially reduced.	Motorized users would have access to roads and trails. Cross-county travel eliminated.	Recreation experience would improve.	Additional disturbances to visuals would be substantially reduced.	This alt, would enhance the protection of the naturalness of these areas.		No opportunity would be available to substitute motorized wheeled crosscountry travel for activities that require more mobility. There is no clear evidence this is what people will choose to do as they age.
Atternative I		User conflicts associated with cross-country travel would be substantially reduced.	Motorized users would have access to roads and trails. Cross-country travel eliminated.	Recreation experience would improve.	Additional disturbances to visuals would be substantially reduced.	This alt, would enhance the protection of the naturalness of these areas.		No opportunity would be available to substitute motorized wheeled cross-county travel for activities that require more mobility. There is no clear evidence this is what people will choose to do as they age.
No Action (Current Management)		User conflicts would continue to increase.	Existing opportunities would remain.	Recreation experience would be reduced.	Objectives for scenic values may not be met.	Motorized wheeled cross- country travel may have an effect on the naturalness of these areas.		Opportunity would be available to substitute motorized wheeled cross-country travel for activities that require more mobility. There is no clear evidence this is what people will choose to do as they age.
Identified Ervironmental Issues	Recreation	User Conflicts	Motorized Recreation	Nonmotorized Recreation	Visuals	Roadless/Wildemess Study Areas	Social	Older Recreationists

			·			
Alternative 5 (Preferred Alternative)	This alt, may meet the desires of this group.	Motorized wheeled cross- country travel opportuni- ties would be available to administer a lease or permit.	This alt, would not be consistent with rural communities' preference for leaving activities on public lands at current levels.	Minor reductions in jobs and employee compensations may occur.	This alt, would offer protection similar to Alt. I, with a minor difference due to the camping and permitted use exceptions.	This alt, would be similar to Alt. 1, with a minor difference due to the camping and permitted use exceptions.
Alternative 4	This alt, would not meet the desires of this group because it may not go far enough to protect the resources on public lands.	Motorized wheeled cross- county travel opportuni- ties would be available to administer a lease or permit.	This alt, would not be consistent with rural communities' preference for leaving activities on public lands at current levels.	Minor reductions in jobs and employee compensa- tions may occur.	This alt, would cause direct and indirect impacts to cultural sites in the analysis area.	Effects under this alt. would be similar to the No Action Alt.
Alternative 3	This alt. may meet the desires of this group in most areas. In open areas, this group feels that current management does not protect resources on public lands.	Motorized wheeled cross- county travel opportuni- ties would be available to administer a lease or permit.	Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action Alt. would apply elsewhere.	Minor reductions in jobs and employee compensa- tions may occur.	Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action Alt. would apply elsewhere.	This alt, would have substantially less risk than the No Action Alt. because only 6.5 million acres would be open and of those lands, many acres would not be available because of dense forest cover. But it has more risk than alt. 1, 5 and 2.
Alternative 2	This alt, may meet the desires of this group.	Motorized wheeled cross- country travel opportuni- ties would be available to administer a lease or permit.	This alt, would not be consistent with rural communities' preference for leaving activities on public lands at current levels.	Minor reductions in jobs and employee compensa- tions may occur.	This alt, would offer protection similar to Alt. 1, with minor differences due to the exceptions.	This alt, would have the third lowest risk for expanding and introducing existing and new weeds to BLM and NFS lands.
Alternative I	This alt, may meet the desires of this group.	Motorized wheeled cross- country travel to administer a lease or permit would only be allowed under specific terms of the lease or permit.	This alt, would not be consistent with rural communities' preference for leaving activities on public lands at current levels.	Minor reductions in jobs and employee compensa- tions may occur.	This alt, would offer the most protection for cultural sites in the analysis area.	This alt, would have the lowest risk for expanding and introducing existing and new weeds to BLM and NFS lands.
No Action (Current Management)	This group feels that current management does not sufficiently protect resources on public lands.	Motorized wheeled cross- country travel opportuni- ties would be available to administer a lease or permit.	This alt. would best respond to rural communities who prefer that current activities on public lands not be limited.	Minor increase in jobs is expected to increase due to projected increases in OHV's and trucks.	This alt, would cause the greatest direct and indirect impacts to cultural sites in the analysis area.	This alt, would have the greatest risk for expanding and introducing existing and new weeds to BLM and NFS lands.
Identified Environmental Issues	Environmental Advocacy	Lessees and Permittees	Rural Communities/ Personal Freedom	Economics of OHV Industry	Cultural Resources	Vegetation and Weeds

Atternative 5 (Preferred Alternative)	Direct and indirect effects would be reduced (habitat fragmentation, habitat abandonment, physiologi- cal effects, and indirect impacts of weeds).	This alt, is similar to Alt, 1, with a minor difference due to the camping and permitted use exceptions.	Impacts to soil resources would be kept to a minimum and widely dispersed.	This alt, would have reduced localized air effects from fewer user-created trails.	This alt. would have no impact to existing holders of mineral leases or permits. Some increase would cour in administrative review of casual use for pre-permit surveying and staking.
Alternative 4	Effects under No Action Alt, would apply from 6/15-8/31 and 12/2-2/15. Effects under Alt. 2 would apply during the other time periods. Overall, impacts to wildlife may be considerably less since closed period is when most travel occurs (fall hunting).	Overall, effects under this alt. would be less than those under No Action Alt. because there would be fewer days during which motorized wheeled cross-country travel could occur.	This alt, would reduce soil erosion by reducing motorized wheeled crosscountry travel to periods when soils are likely dry or frozen.	This alt, would offer no real difference from the No Action Alt.	Effects under No Action Alt. would apply from 6/ 15-8/31 and 12/2-2/15. Effects under Alt. 2 would apply during the other time periods.
Alternative 3	Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action Alt. would apply elsewhere.	Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action Alt. would apply elsewhere.	Overall accelerated soil erosion from motorized wheeled cross-country travel would be reduced, except if such travel were to occur in a concentrated manner.	Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action Alt. would apply elsewhere.	Effects under Alt. 2 would apply where motorized wheeled cross- country travel is prohibited. Effects under No Action Alt. would apply elsewhere.
Alternative 2	Direct and indirect effects would be reduced (habitat fragmentation, habitat abandonment, physiological effects, and indirect impacts of weeds).	This alt, is similar to Alt. 5, with minor differences due to the additional exceptions.	Impacts to soil resources would be kept to a minimum and widely dispersed.	This alt, would have reduced localized air effects from fewer user-created trails.	This alt. would have no impact to existing holders of mineral leases or permits. Some increase would occur in administrative review of casual use for pre-permit surveying and staking.
Alternative I	Direct and indirect effects would be reduced (habitat fragmentation, habitat abandonment, physiological effects, and indirect impacts of weeds).	This alt, would provide greatest risk reduction for further impacts to aquatic resources.	Impacts to soil resources would be kept to a minimum and widely dispersed.	This alt, would have reduced localized air effects from fewer user-created trails.	This alt, would cause increased administrative review before some routine activities could occur.
No Action (Current Management)	The current level of impact to wildlife and wildlife habitat would continue with this alt.	This alt, would provide no risk reduction for further impacts to aquatic resources.	This alt, would have the greatest potential to impact soil resources.	This alt, would have the greatest potential to influence short-term air quality in the immediate area.	This alt. would have no impact.
Identified Environmental Issues	Wildlife	Aquatic Resources	Soils	Air	Minerals

PUBLIC INVOLVEMENT

The Forest Service and BLM conducted public involvement for the proposed amendments consistent with procedures required by the National Environmental Policy Act. A Notice of Intent was published in the Federal Register on January 22, 1999. Nearly 14,000 scoping letters were mailed out. The comment period was extended to May 31,1999. During that time 35 open houses were conducted, which approximately 1400 people attended. During the scoping period nearly 3,400 letters were received and reviewed and used to identify issues and develop alternatives.

The draft EIS had a 90 day comment period that ended February 24,2000. During this period 35 open houses were hosted with over 1,500 people attending. Over 2,300 letters were received and analyzed.

A thorough description of the public involvement process and responses to comments is located in Chapter 4 of the FEIS.

LEGALLY REQUIRED FINDINGS

National Forest Management Act: Finding of Nonsignificant Amendment

The NFMA significance determination is based on a review of the degree to which management direction for the area covered by a forest plan is being changed. The purpose of this amendment is to restrict motorized wheeled cross-country travel to avoid future impacts to soil, water, vegetation, wildlife and its habitat, the spread of invasive weed species, damage to cultural resources and minimize user conflicts. These problems are occurring in some areas. A major reason for this decision is preventative in nature. Given the increases in OHV use in the past ten years and the expectation of that trend to continue the decision to amend forest plans to restrict cross-country travel has been made.

NFMA provides that forest plans may be amended in any manner, but if the amendment results in a significant change in the plan, additional procedures must be followed. The Forest Service Handbook (FSH 1909.12) identifies four factors to consider in determining whether an amendment is significant. These are addressed below for this amendment.

It is important to put these decisions into context with national direction for OHV management. The Executive Orders 11644 and 11989 direct federal agencies to establish procedures to control and direct the use of OHV's on public lands so as to (1) protect the resources of those lands, (2) promote the safety of all users, and (3) minimize conflicts among the various users of those lands. The E.O.'s require the designation of areas and trails for use by OHV's. These amendments only deal with the area designation. Existing land management plans allocated lands to one of three categories: closed - no motorized travel permitted; restricted - seasonally or year-long restrictions on the use of OHV's; open - areas open to use anytime. These amendments shift lands from open and seasonally restricted to yearlong restrictions. These amendments result in minor changes in the use of the forests for motorized recreationists as discussed in chapter 3, recreation section of the FEIS. It explains that motorized recreation is just one segment of the overall suite of possible activities provided on the national forests/grasslands. And that OHV motorized wheeled crosscountry travel recreation is just a small portion of the motorized forms of recreation (approximately 1%, see chapter 3, recreation section of FEIS).

The following four factors and their discussion were used in determining significance:

Timing: Identify when the change is to take place. Determine whether the change is necessary during or after the plan period or whether the change is to take place after the next scheduled revision of the forest plan.

NFMA requires that Forest and Grassland Plans be revised at least every 15 years. These plans have been in place since 1986-1987. The plan revisions are scheduled in the next couple of years. Thus it is late in the current planning period.

These OHV area designation amendments are taking placeduring the current planning period prior to completion of the revisions. As stated in FSH 1909.12, chapter 5.32, "the later the change, the less likely it is to be significant for the current forest plan."

Location and Size: Determine the location and size of the area involved in the change. Define the relationship of the affected area to the overall planning area.

The following table displays the acres and percentage of each forest plan that is and is not affected by these amendments.

National Forest/ Grassland	Acres Open Yearlong	Acres Closed/ Restricted Yearlong	Total Acres	Percent of Unit Open
Beaverhead-Deerlodge*	1,921,000	1,431,000	3,352,000	57%
Bitterroot**	796,000	321,000	1,117,000	71%
Custer	758,000	429,000	1,187,000	64%
Dakota Prairie***	1,260,000	0	0	100%
Flathead	1,211,000	1,142,000	2,353,000	51%
Gallatin	780,000	1,021,000	1,801,000	43%
Helena	571,000	404,000	975,000	59%
Kootenai**	1,447,000	670,000	2,220,000	70%
Lewis & Clark	1,347,000	516,000	1,862,000	72%

^{*}These two forests are administered as one forest but have two separate plans.

The area involved with the change in designation ranges from 43 to 100 % of the affected forests/ grasslands, which is fairly large. However the forest/ grassland recreation experts have estimated the number of cross-country wheeled OHV users to be about 1% of all OHV users across the forests/grasslands and the range is from less than 1% to 10% (chapter 3 FEIS). Most wheeled motorized OHV use occurs on roads and trails. Roads and trails remain open within existing restrictions. As described in the environmental setting in chapter 3 much of the National Forest System lands are steep and trees and other vegetation is dense enough to preclude cross-country use by OHV's cross-country. Therefore the change in designation has a much smaller effect on OHV users than depicted by these figures since roads and trails remain open. More than three quarters of the Northern Region is forested. Because of the small magnitude of effects and the fact that much of the land is not now accessible this is not a significant amendment.

Goals, Objectives and Outputs: Determine whether the change alters long-term relationships between the levels of goods and services projected by the forest plan. Consider whether an increase in one type of output would trigger an increase or decrease in another. Determine whether there is a demand for goods or services not discussed in the forest plan.

This amendment is fully consistent with the goals in all nine of the forest plans affected. None of the goals will be altered by this decision. There are no new forest plan goals established.

This amendment is fully consistent with and does not alter the objectives of each forest plan. No new objectives are established.

There are no significant changes, in outputs projected by the forest/grassland plans, expected as a result of this decision. The greatest effect is upon motorized OHV users. This effect is relatively minor since the majority of use (estimated to be 99% in the EIS) is on roads and trails and thus is minimally altered by this decision. It is expected that most of the OHV users that have recreated cross-country will shift their activity to roads and trails rather than stop recreating altogether. There will be some benefits for wildlife habitat, slightly reduce the spread of noxious weeds, slightly improve habitat for some Threatened and Endangered species. None of these changes alter the long-term projections of goods and services projected in the forest/grassland plans.

This decision does not deal with a demand for goods or services that were not discussed in the previous planning efforts.

Management Prescription: determine whether the change in a management prescription is only for a specific situation or it would apply to future decisions throughout the planning area. Determine whether or not the change alters the desired future condition of the land and resources or the anticipated goods and services to be produced.

This amendment does not change any Management Area (MA) designations. It does change where the motorized activity within the MA's can be conducted. It eliminates the motorized wheeled cross-country travel, with a few specifically managed exceptions, but does not change the current use of roads and trails in place now.

This decision does change the designation of areas for wheeled motorized cross-country travel for future decisions not just for a specific situation.

^{**}Acreages only include lands in Montana.

^{***}Part of the Custer NF plan. A separate plan is currently being developed.

It does not change the desired future condition of the land and resources as described in the existing plans or make a consequential change in goods and services that are produced.

Conclusion: Based on a consideration of the four factors, and considering the nine Plans being amended, I have determined that the adoption of this amendment is not significant under NFMA. This amendment is fully consistent with the current goals and objectives of the respective plans.

National Forest Management Act: Diversity and Viability Provisions for Fish and Wildlife

The National Forest Management Act requires the Secretary of Agriculture to specify "guidelines for land management plans developed to achieve the goals of the Program which provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives" (16 U.S.C. 1604(g)(3)(B)). In accord with this diversity provision, the Secretary promulgated a regulation that provides in part: "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area" (36 CFR 219.19).

The scientific community and courts recognize that NFMA does not create a concrete, precise standard for diversity. The Committee of Scientists that provided scientific advice to the Forest Service on drafting of NFMA regulations stated that "it is impossible to write specific regulations to 'provide for' diversity" and "there remains a great deal of room for honest debate on the translation of policy into management planning requirements and into management programs" (44 Fed. Reg. 26,600-01 & 26,608).

In this planning context, absolute certainty is not possible. Thus, the determination is a matter of risk or likelihood when considering the effects of the action.

In making the determination for this decision the effects displayed in chapter 4 of the FEIS, indicate alternative 5 will be beneficial for wildlife by reducing disturbance of the animals and damage to plants. It will reduce the damage to habitat and reduce the spread of invasive exotic plants. It will reduce the amount of sediment introduced to streams, result in less damage to riparian zone soil and vegetation. Therefore, I conclude this decision will positively contribute to the maintenance of diversity and viability of fish and wildlife on the national forest lands affected.

Endangered Species Act

A team of biologists and botanists prepared a Biological Assessment on this proposed amendment to the Forest Plans. This Biological Assessment, which is included as Appendix C of the Final EIS, summarizes the consultation process on the proposed plan amendment, and evaluates the potential effects of the proposed amendment on listed species and species proposed for listing. The Biological Assessment determined that the proposed amendment is may effect, not likely to adversely affect the, threatened grizzly bear, bald eagle, piping plover, buil trout and Canada lynx or bull trout, endangered gray wolf and blackfooted ferret, or mountain plover and Spalding's catchfly. The last two determinations would be made if the final rule were to list them. It was determined the amendment will have no effect on the endangered least tern, whooping crane, pallid sturgeon, white sturgeon, American burying beetle or the threatened water howellia, Ute ladies' tresses and western prairie fringed orchid.

The Forest Service requested that the U.S. Fish and Wildlife Service review the Biological Assessment in a letter dated December 7, 2000. The Fish and Wildlife Service concurred and stated that it did not anticipate any incidental take of listed species as a result of the proposed amendment. As a result, they concluded that formal consultation under the Endangered Species Act is not required.

NEPA: Environmentally Preferred Alternative

The Council on Environmental Quality regulations for implementing NEPA require that the Record of Decision specify "the alternative or alternatives which were considered to be environmentally preferable" (40 CFR 1505.2(b)). This alternative has generally been interpreted to be the alternative that will promote the national environmental policy as expressed in NEPA's Section 101 (CEQ's "Forty Most-Asked Questions", 46 Federal Register, 18026, March 23, 1981). Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

Alternative 1 is the environmentally preferred alternative since it has the greatest level of restrictions on the use of wheeled motorized OHV's traveling cross-country, therefore it would have the least effects on the biological, physical, cultural and historic resources.

Environmental Justice (Executive Order 12898)

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires that Federal agencies make achieving environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of their programs, policies, and activities on minority populations and low-income populations.

We have conducted a qualitative assessment of environmental justice considerations based on the information in the Final EIS. My conclusion is that the risk of such disproportionate effects on minority or low-income populations from this amendment is very low. The Final EIS consistently ranks Alternative 5 as among those with the lowest risk of adverse environmental effects from land management activities. Based on the assessment there is no evidence that the low level or risk is disproportionately placed on low income or minority populations.

Alternative 5 also does not pose any significant socioeconomic risks that disproportionately affect low income or minority populations in communities where timber producing employment opportunities and workers are located. Alternative 5 will not cause a significant change in local employment or revenue sharing with local communities. Thus, this decision should not disproportionately affect low-income or minority populations and communities.

ADMINISTRATIVE APPEAL **OPPORTUNITIES**

Implementation of this decision shall not occur until 7 days following publication of the legal notice of the decision in the following newspapers of record: Missoulian, Great Falls Tribune, Billings Gazette, Montana Standard, Ravalli Republic, Bismark Tribune, Rapic City Journal, Daily Interlake, Bozeman Chronicle and the Independent Record.

This decision to adopt a is subject to appeal pursuant to 36 CFR 217.

This Forest Plan Revision was developed using planning regulations that were adopted in 1982 under 36 CFR 219. On Thursday November 9, 2000 new regulations for the appeal process (36 CFR 217) and the forest planning process (36 CFR 219) were adopted through publication in the Federal Register. Instead of an appeal process an objection process will be used for any decisions made using the new planning regulation.

Since this plan was developed using the 1982 planning regulation that means there is neither an appeal or objection process for this decision. Given this situation I have decided to provide for what I am calling a voluntary appeal process on the Forest Service's part using the same procedures as outlined in the now obsolete 36 CFR 217 appeal process. Therefore, this decision is subject to administrative review pursuant to 36 CFR 217 prior to their removal. What that means is a written appeal of this decision, a nonsignificant Forest Plan amendment, must be filed in duplicate within 45 days of the date of the published legal notice. Appeals must be filed with:

Chief, USDA Forest Service 14th and Independence, SW 201 14th Street Washington, DC 20250

Any notice of appeal must be fully consistent with 36 CRF 217.9 and include at a minimum:

- A statement that the document is a Notice of Appeal filed pursuant to 36 CFR part 217.
- The name, address, and telephone number of the appel-
- Identification of the decision to which the objection is being made.
- Identification of the document in which the decision is contained, by title and subject, date of the decision, and name and title of the Deciding Officer.
- Identification of the specific portion of the decision to which objection is made.
- The reasons for objection, including issues of fact, law, regulation, or policy and, if applicable, specifically how the decision violates law, regulation, or policy.
- Identification of the specific change(s) in the decision that the appellant seeks.

For questions concerning the appeal process, contact:

USDA Forest Service

Attention: Ecosystem Management Staff (Steve Segovia)

P.O. Box 96090

Washington, D.C. 20090-6090

(202) 205-1066

For questions concerning this amendment, contact:

Dave Atkins Interdisciplinary Team leader 200 East Broadway Missoula, MT 59870 (406) 329-3134

Dale N. Bosworth

Pale M. Bosenie

REGIONAL FORESTER, Northern Region

APPENDIX B - FOREST PLAN AMENDMENT #21

Bitterroot National Forest Land and Resource Management Plan

November 2001

Introduction

The Bitterroot National Forest Land and Resource Management Plan (Forest Plan) was approved in September 1987. Changes affecting the Forest Plan since that time have required periodic amendments to keep it current. This amendment applies only to the Burned Area Recovery Project and pertains to the following Forest Plan standards:

- · Forest-wide snag retention standard.
- · Forest-wide elk habitat effectiveness standard in Laird Creek.
- · Forest-wide thermal cover standard in the Skalkaho-Rye Geographic Area.
- Coarse woody debris standards for several Management Areas.

The Burned Area Recovery Project and this amendment are designed to meet the Forest-wide and Management Area goals and objectives as described in the Plan. The relationships between this amendment and Forest Plan goals and objectives, as well as potential effects of this amendment are further described in the Burned Area Recovery Final Environmental Impact Statement (FEIS pages I-16 to I-20 and throughout Chapter IV).

Changes to Forest Plan Standards

Snags

Forest-wide standard 2.e.(3) (FP page II-20) is clarified and amended for this project to read:

"Snags should be maintained within each Burned Area Recovery activity area at or above the levels specified in the following table and explanations:

Table B-1 - Snag Standard

VRU	Snags (average trees per acre)
- 2	2-5
3	4-12
4	10-15

- Distribution of retained snags will be irregular and clumped, include representation across size classes in the unit, but favor the largest trees.
- . Snags retained in RHCA exclusion zones will be in addition to the snags per acre left in treatment units.
- In order to meet OSHA requirements for a safe work environment, retained snags must be grouped in helicopter harvest units. Groups may be retained in "lobes" or other concentrations within treatment units outside and contiguous with RHCAs or other areas adjacent to treatment units.
- · Minimum snag levels are regardless of fire severity.

Elk Habitat Effectiveness

Forest-wide standard 2.e.(14) (FP page II-21) is amended for this project in the Laird Creek third order drainage (03m307-4) to read:

"Manage roads in the Laird Creek third order drainage to attain at least 45% elk habitat effectiveness."

Big Game Winter Range

The Forest-wide standard for big game winter range (FP ROD pg. 8) is amended for this project in the Skalkaho-Rye Geographic area to read:

"Winter range thermal cover will be maintained at or above four percent within the Skalkaho-Rye Geographic Area."

Management Area Standards for Woody Debris (Soil Productivity and Non-game Species Habitat)

Management Area standards

MA-1: 3.f.(4) – page III-6 MA-2: 3.f.(3) – page III-12

MA-2: 3 j.(2) - page III-13

MA-3a: 3.f.(3) - page III-18

MA-3c: 3.f.(2) - page III-32 are amended for this project to read:

"To maintain soil productivity and meet wildlife objectives, coarse woody debris should be maintained within each Burned Area Recovery activity area at or above the minimum levels identified in the following table and descriptive objectives.

Table B-2 - Coarse Woody Debris Objectives

VRU	Fires Severity	Coarse Woody Debris
	Low	5 tons/acre
2	Moderate / High	10 tons/acre
3	Low	20 tons/acre
	Moderate / High	20 tons/acre
4	Low	25 tons/acre
	Moderate / High	25 tons/acre

- These are minimum coarse woody debris amounts to be retained for a given VRU and fire severity. They are to be
 maintained at the treatment area (unit) level rather than on an acre-by-acre scale. To account for the natural
 variability and potential for each area, site-specific prescriptions will be developed, with appropriate
 interdisciplinary involvement, to specify the appropriate amount of CWD to leave over and above these minimums.
- Retain the recommended woody debris with material generally in larger size classes (greater than 4" in diameter) and well distributed across the treatment area (Graham et al., 1994 and Graham, personal communication 2001).
 Material greater than 4 inches in diameter and not consumed in the fires of 2000 can be included in the tonnage.
- Material should also vary by species and by size classes available across the treatment area.
- The coarse woody debris amounts are in addition to designated snags (dead trees retained for wildlife needs as
 described in Table B-1), snag replacement trees (live trees retained to provide snags in the future), stumps, woody
 material less than four inches in diameter, and logs placed on slope contour for post-fire erosion control.
- Material to be retained for coarse woody debris may or may not be felled to the forest floor. Coarse woody debris
 material may be left standing and allowed to fall naturally over time.

In areas of low severity burns, much of the pre-fire coarse woody debris is still present. If any additional coarse woody debris per acre is needed, dead/dying trees and/or green/live trees (coarse woody debris recruitment) may be used to achieve the minimums listed above."

Amendment 22

Goat Flat and East Fork of Bitterroot Research Natural Area

Establishment Record

Document in permanent Forest files.



Forest Service Bitterroot National Forest

1801 N. First Hamilton, MT 59840 406-363-7100

File Code: 1950-1

Date: July 18, 2002

Dear Interested Party:

Enclosed Is a copy of the Decision Notice and Finding of No Significant Impact (FONSI) for the Slate/Hughes Watershed Restoration and Travel Management Project on the West Fork Ranger District, Bitterroot National Forest. For the reasons discussed in the Decision Notice and FONSI, I have decided to implement the actions as proposed.

This decision is subject to appeal pursuant to 36 CFR 215.7. The appeal period will begin the day after the legal notice appears in the Ravalli Republic.

For more information on this decision contact Jim Aronson or Tim Trotter at the West Fork Ranger District at 406-821-3269.

Thank you for your participation.

Les ley Wo Thompson

Sincerely,

LESLEY W. THOMPSON Acting Forest Supervisor

Enclosure

DECISION NOTICE AND FINDING OF NO SIGNIFICANT IMPACT

SLATE/HUGHES WATERSHED RESTORATION AND TRAVEL MANAGEMENT

USDA FOREST SERVICE WEST FORK RANGER DISTRICT, BITTERROOT NATIONAL FOREST RAVALLI COUNTY, MONTANA

I. Introduction

Decision

I have decided to implement Alternative 1, the proposed action, as described in the Slate/Hughes Watershed Restoration and Travel Management Environmental Assessment (EA), on pages 4 and 5. Implementation of Alternative 1 includes watershed restoration activities, travel management activities, and a site-specific amendment to the Forest Plan.

Watershed restoration activities will include improving water drainage from roadbeds, road obliteration and de-compaction, seeding, planting trees and shrubs, and reducing motorized access to provide for re-vegetating and stabilizing the roadbeds. About 25.7 miles of road will be removed from the existing road system and the necessary rehabilitation measures implemented. These activities are identified in the Project File, item 4.3. Other activities relating to watershed and fisheries improvement are graveling road segments that are near streams (EA, Chapter III pages 14, 16-19), and controlling vehicle access at dispersed campsites to protect stream banks and riparian vegetation.

Travel management includes restricting motorized access on some roads and trails for the purpose of moving the area closer to the Forest Plan open road density standards for Elk Habitat Effectiveness, for public safety, and for resource protection while allowing reasonable public access. The changes in motorized uses for the roads in the area are shown on the attached table and map. This action will place additional travel restrictions on 22.5 miles of road. All system trails in the analysis area will remain in their current travel status with the exception of Trails 673, 606, 248, 56 (from the junction of Trail 601 to Trail 248), 400 and 103 in the Overwhich, Saddle Mountain and Piquett Mountain area. Portions of these trails will be closed to motorized use during the general hunting season (Oct. 15 to Dec. 1). Approximately 32 miles of trail will be affected by these restrictions. Closed roads may be opened for firewood gathering during dry periods as areas with dead wood concentrations are identified. All non-system roads and trails will

be designated closed to motorized use, and will be rehabilitated or physically closed where needed to mitigate resource damage.

I have also decided to construct about 1/4 mile of new trail for ATV and motorcycle access between roads 5706A and 5702 to provide a loop route. In addition, one half of the road surface on 4.3 miles of road no longer needed for resource management will be ripped and opened to ATV, motorcycle and snowmobile recreation opportunities from Dec. 1 to Oct. 15.

This proposal also includes closing an old mineshaft south of Elk Creek for public safety reasons (EA page 5).

I am approving a site-specific amendment to the Forest Plan elk habitat effectiveness (EHE) standard for five of the 24 third order drainages within the project area. This amendment would allow these five areas to continue to be managed at slightly less than the 50 percent numerical EHE standard prescribed in the Forest Plan. This will still improve on the current elk security within the area, maintain reasonable public access within the Slate/Hughes area, and will continue to support and achieve the overall Forest-wide elk objectives. Specifically, Forest-wide standard 2.e. (14)(FP page II-21) is amended, for this project only, to read: "Manage roads in the following third order drainages (TOD) to attain at least the listed elk habitat effectiveness: 40% EHE for TOD 01C462-1; 45% for TOD 01D463-1; 47% for TOD 01D464-1; 49% for TOD 01D464-3; and 37% for TOD 01D467-1.

This document outlines my rationale for approving the activities associated with the Slate/Hughes project. These management activities will reduce the amount of sediment being delivered to the streams in the area, improve the level of big game habitat effectiveness and security, reduce road maintenance needs and costs, and will help to implement the Bitterroot National Forest Plan.

I am the responsible official for this project. The rationale for my decision is discussed in Section V below. The scope of my decision is limited to watershed restoration, travel management, and associated activities. My decision is site-specific. It is not programmatic nor is it a management plan for the entire Slate/Hughes Area.

Decision Summary

In the EA I identified the specific decision to be made as a result of the analysis. My decision is to select Alternative 1. Several of the culverts that were identified during the data collection and scoping phase of this analysis as barriers for fish passage were selected for replacement in the Bitterroot Burned Area Recovery EIS and will likely be replaced in the next few years. Therefore, these culvert replacements will not be part of this decision. My decision is based on my review of the purpose and need to reduce the amount of sediment being delivered to the streams in the area, and the need to improve big game habitat effectiveness and security. My selection is also based on the comments from the public and the analysis of the impacts of the alternatives. My staff and I have

reviewed all the comments from the public and have considered those issues that are relevant to my decision (EA Appendix E).

II. Overview of the Decision Area

Location

The project area is located on the West Fork Ranger District in the Hughes Creek and Overwhich Creek drainages as well as a portion of the Slate Creek drainage. These drainages are east and southeast of Painted Rocks Lake.

Description of the Project Area

This project in concerned with the existing road and trail systems as well as trails created by forest users that are not part of the planned and maintained system. Generally, the roads in the analysis area were constructed to access and remove natural resources or to access private lands. Mining exploration and extraction has occurred in the area, most extensively in the Hughes Creek drainage. The Overwhich trail was constructed to provide mining access and has since been used for foot, horseback, ATV and motorcycle access. The majority of the roads in this area were constructed to provide access for timber harvesting activities and the existing travel restrictions were implemented mostly to mitigate wildlife concerns associated with open road densities. Wide ranges of recreational activities that utilize the road system take place here. These include hunting, fishing, camping, hiking, mountain biking, cross country skiing, snowmobiling, motorcycle and ATV riding and sightseeing.

III. Desired Condition and Need for Action

Introduction

The Forest Plan, based on the various considerations addressed in the Final Environmental Impact Statement (FEIS), guides all natural resource management activities and establishes standards for the Bitterroot National Forest. The environmental assessment incorporates direction provided in the Forest Plan EIS, Record of Decision, and Forest Plan (1987). The Forest Plan delineates Management Areas (MA's) that respond to Forest goals and objectives, and provides management standards to meet those goals and objectives. Management areas 1, 2, 3a, 3b, 5 and 8a are included in the Slate/Hughes area. The goals of each management area and standards relating to transportation, wildlife, fisheries, recreation, soils and water and road system and related to this analysis are described below.

MA-1 Goals: Emphasize timber management, livestock and big game forage production, and access for roaded dispersed recreation activities and mineral exploration.

Assure minimum levels for visual quality, old growth, and habitat for other wildlife species.

<u>Standards:</u> Recreation - Manage for recreation activities associated with roads and motorized equipment.

Wildlife and Fish – Maintain elk habitat effectiveness through closures as specified in the Forest-wide Standards.

Water and Soil – Utilize watershed rehabilitation projects, such as stabilizing road cut or fill slope slumps, to repair problems.

Road System - Road density will be determined through transportation planning and the results will be reviewed by interdisciplinary teams and documented in project environmental analysis reports. In most cases the density should not average more than 6.6 miles per section on land types -40 and MN+40, and 3.8 miles per section on land type S40M60 in each third order drainage.

MA-2 Goals: Optimize elk winter range habitat using timber and other vegetation management practices. Access will provide for mineral exploration and roaded dispersed recreation activities. Provide moderate levels of visual quality, old growth, habitat for other wildlife species, and livestock forage.

<u>Standards:</u> Recreation – Manage for recreation activities associated with roads and motorized equipment. Off-road vehicle use will be controlled during critical periods on susceptible ranges such as high-use winter range, spring range, and densely roaded fall range.

Wildlife and Fish – Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards.

Water and Soil – Utilize watershed rehabilitation projects, such as road cut or fill slope slump stabilization, to repair problems.

Road System – Road density will be determined through transportation planning and the results will be reviewed by interdisciplinary teams and documented in project environmental analysis reports. In most cases the density should not average more than 6.6 miles per section on land types –40 and MN+40, and 3.8 miles per section on land type S40M60 in each third order drainage.

MA-3a <u>Goals</u>: Maintain the partial retention visual quality objectives and manage timber. Emphasize roaded dispersed recreation activities, old growth, and big-game cover. Provide moderate levels of timber, livestock forage, and big-game forage. Restrict road density where necessary to meet visual objectives but provide access as needed for mineral exploration.

<u>Standards:</u> Recreation – Manage to provide recreation opportunities associated with main access roads and fishing streams. Most of the area that can be roaded is already roaded. Off-road vehicle use will be restricted during critical periods on susceptible ranges such as high-use winter range, spring range, and densely roaded fall range.

Wildlife and Fish – Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards.

Water and Soil - Utilize watershed rehabilitation projects, such as road cut or fill slope slump stabilization, to repair problems.

Road System - Road density will be determined through transportation planning and the results will be reviewed by interdisciplinary teams and documented in project environmental analysis reports. In most cases the density should not average more than 5.5 miles per section on land type —40, 3.3 miles per section on land type MN+40, and 2.2 miles per section on land type S40M60 in each third order drainage.

MA-3b <u>Goals</u>: Manage riparian areas to maintain flora, fauna, water quality, and water-related recreation activities. Emphasize water and soil protection, dispersed recreation use, visual quality, and old growth. Provide low levels of timber harvest, livestock forage, and big-game forage on fisheries riparian areas, and moderate levels of timber harvest and forage on nonfisheries riparian areas. Roading in riparian areas will be restricted to meet water quality and fish objectives.

<u>Standards</u>: Wildlife and Fish – Maintain the elk habitat effectiveness standards of the surrounding management areas through road closures as specified in the Forest-wide standards.

Water and Soil – Utilize watershed rehabilitation projects, such as road cut or fill slope slump stabilization, to repair problems.

MA-5 Goals: Emphasize motorized and nonmotorized semi primitive recreation activities and elk security. Manage big-game winter range to maintain or enhance big-game habitat.

<u>Standards:</u> Recreation – Manage for recreation activities associated with roadless areas, including hiking, hunting, fishing, camping, motor biking, and snowmobiling.

The Travel Plan will identify the areas, trails and roads open for motorized vehicle use and the types of vehicles that are permitted. Motorized use will not be permitted where wildlife, adjacent wilderness, soil and water resources, or public safety are threatened.

Facilities and trails will be compatible with the semi primitive setting. Some trails constructed to accommodate off-road vehicle use.

Road System - Maintain road surface for public safety and to protect the environment.

Soil and Water - Trail improvement or construction will be implemented with emphasis on soil stability and stream protection.

MA-8a Goals: Manage at the minimum level for elk security, old growth, and habitat diversity; but protect timber, soil, water, recreation, range and wildlife and resources on adjacent management areas. Maintain existing uses and facilities.

Standards: Recreation – Maintain trails and roads that pass through these units for recreation use unless closure is required to meet other resource standards. Wildlife and Fish – Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards.

Water and Soil – Utilize watershed rehabilitation projects, such as road cut or fill slope slump stabilization, to repair problems.

In addition to the Forest Plan, standards for fisheries are also contained in the Inland Fish Strategy (INFISH) Environmental Assessment and Decision Notice (USDA Forest Service, 1995). The Bitterroot Forest Plan was amended in August 1995, with the signing of the INFISH Decision Notice. INFISH is an aquatic conservation strategy that was developed by the Forest Service to protect resident native trout populations on federal lands.

Existing and Desired Conditions

Existing Conditions for the Transportation System

About 206 miles of system roads are located in the assessment area with 83 miles open yearlong to all motorized vehicles. The remaining 123 miles of roads have either seasonal or yearlong motorized use travel restrictions in place. These restrictions were the result of past decisions, some related to wildlife concerns, others for the protection of the road surface while these roads were not being used for resource management purposes. Generally, the roads in the analysis area were constructed to access and remove natural resources or to access private lands.

In 1992 an intense rainstorm occurred in the Overwhich drainage. This event coupled with the fire that had previously occurred resulted in severe damage to road 5700 and several of its spurs. The access to the majority of this road was washed out and it has been used only for rehabilitation and reforestation purposes since. A portion of road 5703 that paralleled the south side of Overwhich Creek was also severely damaged in the event. It was closed to highway vehicles yearlong and open to ATV's and motorcycles seasonally before the damage occurred. This portion of the road has been removed from the road system and reconstructed for seasonal ATV and motorcycle access (Trail 674).

Desired Condition for the Transportation System

Where open road densities are high, impacts to Elk Security are reduced by restricting road use. An adequate transportation system that provides for vegetation and commodity management and diverse recreation opportunities is desired. Erosion control on all open and closed roads is desirable for watershed improvement and could involve stabilization, revegetation, resurfacing, cross draining and decommissioning. Sufficient funding to cover annual and deferred maintenance on all roads is desired.

Existing Condition for Wildlife

Open road density directly affects big game security during the hunting season. Elk Habitat Effectiveness is also affected by open road densities as well as hiding and thermal cover. Forest Plan standards for open road densities are not met in seven third order drainages in this project area. The table below shows the miles of open road, open road density, Elk Habitat Effectiveness and the Forest Plan standard for each third order drainage.

THIRD ORDER DRAINAGE	DRAINAGE AREA (M²)	MILES OPEN ROAD	OPEN ROAD DENSITY	CURRENT EHE (%)	F.P. STANDARD
01B455-1	2.8	5.6	2.0	50	50
01B455-2	4.1	4.3	1.1	58	50
01C456-2	2.2	0	0	100	50
01C458-2	6.8	2.26	.3	85	60
01C461-1	2.6	.18	.07	95	50
01C461-2	2.1	.11	.05	95	60
01C462-1	2.5	6.9	2.8	40	50
01C462-2	3.6	6.0	1.7	53	50
01C463-1	.53	0	0	100	60
01C463-2	1.8	.66	.37	80	60
01C463-3	3.3	2.82	.85	57	50
01C462-3	2.6	1.1	0.4	80	50
01D405-1	3.9	.82	.2	90	60
01D459-1	1.9	1.2	.6	70	60
01D459-2	4.9	3.8	.8	65	60
01D463-1	1.67	4.3	2.6	45	50
01D464-1	2.67	6.3	2.4	47	50
01D464-2	3.7	13.3	3.6	35	50
01D464-3	1.9	4.3	2.2	49	50
01D464-4	.96	2.6	2.7	44	50
01D466-4	3.5	.17	.04	95	60
01D466-5	3.3	2.97	.9	63	50
01D467-1	1.2	3.7	3.1	37	50
01D467-4	3.7	.1	.02	95	60

Desired Condition for Wildlife

Where open road densities are high, impacts to Elk Security are reduced by restricting road use during the general hunting season.

Existing Condition for Watershed and Fisheries

The Bitterroot NF has designated the upper West Fork drainage as a "priority watershed" for the recovery and preservation of native trout species. The Slate Hughes analysis area comprises a major part of this priority watershed, and contains important habitat refugia

for bull trout and westslope cutthroat trout. Migratory and resident forms of both species occupy, spawn, and rear throughout the analysis area.

The Slate Hughes analysis area is home to one Sensitive fish species (the westslope cutthroat trout, *Oncorhynchus clarki lewisi*) and one Threatened fish species (the bull trout, *Salvelinus confluentus*). In general, fish habitat is in good condition in the Hughes, Overwhich, and Slate Creek watersheds. However, there are some areas where roads contribute increased amounts of sediment, particularly in the lower halves of the three watersheds where road densities are higher. The two areas where roads create the most problems for fish are along road segments that closely encroach on streams, and at road stream crossings. Impacts to habitat that occur along these two areas include: (1) increased sediment input; (2) losses of shade on the stream, which depending on magnitude and location, can contribute to warmer water temperatures; (3) localized reductions in woody debris recruitment to the stream; (4) straightening of the stream channel which causes higher velocities and reductions in habitat complexity; (5) separation of the stream from its floodplain; and (6) easier human access, which increases the number of fish lost to angling; and (7) the creation of fish passage barriers at road culverts.

The fish-bearing streams in the Hughes, Overwhich, and Slate Creek watersheds contain a total of about seven miles of encroached road, and 25 road stream crossings on Forest Service land, a relatively small number considering the large size of the analysis area and the large number of fish-bearing streams (33) in those watersheds. The number of road stream crossings on the non-fish-bearing intermittent tributaries is much higher (308). The stream reaches that are affected the most by road encroachment include the lower several miles of Hughes, Overwhich, Slate, and Mine Creeks (a major tributary to Hughes Creek). The following table summarizes road densities, road densities within 300 feet of streams, and road stream crossings for the Hughes, Overwhich, and Slate Creek watersheds.

Watershed	NRCS 6 th Code HUC	Road Density (BNF only)	Road Density (entire watershed)	Road Density within 300' of Streams (BNF only)	Road Density within 300' of Streams (entire watershed)	# Road Stream Crossings (BNF only)	# Road Stream Crossings (entire watershed)
Slate	0106	0.8	0.8	0.10	0.11	18	18
Hughes	0103	1.3	1.5	0.17	0.20	151	166
Overwhich	0104	1.5	1.8	0.21	0.23	164	172

The culvert fish barriers in the Hughes, Overwhich, and Slate Creek watersheds have already been identified in the Bitterroot Burned Area Recovery FEIS, and are planned for replacement over the next couple of years. For that reason, we are not proposing to fix culvert barriers in this project.

Desired Condition for Watershed and Fisheries

The key benefits to the fishery to be gained by this project are to improve watershed health (by reducing road densities and the number of road stream crossings), and reduce the amount of sediment that is added by the road network at stream crossings and encroached segments.

Vegetation

Existing Condition for Noxious Weeds

Spotted knapweed is common throughout the project area, and is currently affecting the ecological health on several hundred acres of grassland and open ponderosa pine habitat important for plant diversity and wildlife forage. Spotted knapweed along the Jew Mountain ATV trail is beginning to spread into some Idaho fescue grasslands. Populations of goatweed have also been found along the Hughes Creek Road. Many of these areas will be treated as specified in the 1998 Noxious Weed Environmental Assessment. More of the analysis area was surveyed for weeds in 1998 and 1999. Two infestations of "new weeds" were located at this time: a small population of blue thistle on a road just south of Jew Mountain and a small population of sulfur cinquefoil at the mouth of Hughes Creek.

The road system is a vector for introducing exotic plant species and noxious weeds into the area. Weed seed can enter an area attached to the undercarriage of vehicles and can be deposited along the road.

Desired Condition for Noxious Weeds

The 1987 Bitterroot National Forest Plan's Forest-wide management goal is to "control noxious weeds to protect resource values and minimize adverse effects on adjacent private land" (pg. II-3). Forest management standards are the same for all Management Areas within the Forest; they state: "the primary means of preventing, containing, or controlling noxious weeds would be through vegetative management practices and by the use of biological agents such as insects, rusts, molds and other parasites on host plants. However, herbicides may be utilized to provide short-term protection on specific sites, after appropriate environmental analysis."

A recent supplement to the Forest Service Manual (FSM 2080) implements an Integrated Weed Management approach for the control of noxious weeds on National Forest System lands in Region One. Included in this supplement are requirements and recommendations for noxious weed management when conducting ground disturbing activities. In order to prevent weed establishment one of the required objectives is to: "Revegetate all disturbed soil, except the travel way on surfaced roads, in a manner that

optimizes plant establishment for that specific site, unless ongoing disturbance at the site would prevent weed establishment. Use native material where appropriate."

Existing Condition for Sensitive Plants

This area contains a diversity of plant life that includes several plants rare in the start of Montana. These species include two species of Penstemon found in adjacent drainages (Overwhich and Hughes Creek). Payette's penstemon (Penstemon payettensis) is found in the Overwhich Creek drainage and Lemhi penstemon (P. lemhiensis) is found in the Hughes Creek drainage. Both of these species are regional endemics, found only in southwestern Montana and central Idaho and there may be instances where they may hybridize. The Slate-Hughes area is the only place on the Bitterroot Forest where the two species are known to occur in such close proximity.

Other rare species found in the Slate-Hughes area include hollyleaf clover (Trifolium gymnocarpon); a species known only from the Painted Rocks are of the Forest, dwarf onion (Allium parvum); Rocky Mountain paintbrush (Castilleja covilleana); and candystick (Allotropa virgata).

Desired Condition for Sensitive Plants

The desired condition for sensitive plants is to ensure that management of lands, water, biota and people provide environmental conditions and trends that contribute to long-term viability of these as well as all native species. Included in the management of sensitive plant species is control or containment of noxious weed populations, as long as these activities don't negatively impact sensitive plant populations.

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IV. Summary of Alternatives Considered

Alternative 1 (proposed action): Watershed restoration activities would include improving water drainage from roadbeds, road obliteration and de-compaction, seeding, planting trees and shrubs, and reducing motorized access to provide for re-vegetating and stabilizing the roadbeds. Other activities relating to watershed and fisheries improvement include graveling road segments that are near streams, and controlling vehicle access at dispersed campsites to protect stream banks and riparian vegetation.

The travel management proposal includes restricting motorized access for the purpose of bringing the area closer to Forest Plan open road density standards for Elk Habitat Effectiveness while allowing for reasonable access, and for public safety. This alternative includes a site-specific amendment to the Forest Plan that modifies the elk habitat effectiveness standard for 5 third order drainages in the assessment area.

Alternative 2: This alternative includes the same watershed restoration activities as the proposed action. Additional travel restrictions would be implemented in order to meet the open road density standards for Elk Habitat Effectiveness described in the Forest Plan.

Alternative 3: This alternative includes the same travel restrictions as in Alternative 1 as well as the site-specific amendment to the Forest Plan described in Alternative 1. In addition to the watershed restoration activities proposed in the Alternatives 1 and 2, all culverts remaining in road 5700 and its spurs would be removed. These roads would also be ripped-and/or re-contoured to slope to allow for water infiltration and the establishment of vegetation. These actions would take place on the section of road 5700 and its spurs starting about ¼ mile beyond the existing gate at the junction with road 5699.

Alternative 4 (no action): The National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA) require this alternative. This alternative describes what environmental effects would happen to the existing condition if no activities were to occur. This alternative provides a baseline for comparing alternatives and predicting environmental effects.

V. Rationale for the Decision

I will now discuss the activities to be implemented in my decision in greater detail and the rationale for my decision. In coming to this decision I have reviewed the Slate/Hughes Watershed Restoration and Travel Management EA, including the effects analysis for the alternatives. I have also taken into consideration comments from the public, other agencies, and Forest Service personnel made during the scoping period and 30-day comment period, and during the meetings with the public on this project. I have also discussed the project activities with ID Team members.

I have decided to implement Alternative 1 because it provides for reasonable public access while addressing the purpose and need for action. The criteria I used in arriving at my decision on the project are: 1) Meeting the purpose and need for action; 2) Consideration of the issues, including comments from the public and other agencies; and 3) How well the project will implement the Bitterroot Forest Plan.

1) Meeting the Purpose and Need for Action

The purpose and need is to reduce the amount of sediment being delivered to the streams in the area and to improve the level of big game habitat effectiveness and security.

Alternative 1 does meet the purpose and need. It provides for the reduction of sediment delivery into the streams by implementing restoration work in the areas identified by the Watershed Improvement Needs survey conducted in 1998. This alternative also

improves the level of big game habitat effectiveness and security by controlling motorized access in areas where open road densities are high while allowing for reasonable access during the big game hunting season.

Alternative 2 does meet the purpose and need. This alternative provides for the reduction of sediment delivery into streams as in Alternative 1. The travel management portion of this alternative would reduce the access in all third order drainages to levels that would meet the Elk Habitat Effectiveness levels that are specified in the Forest Plan. However, after careful review of the access restrictions that would be implemented under this alternative, I do not believe that this alternative provides for reasonable public access.

Alternative 3 also meets the purpose and need. The travel management portion of this alternative improves the level of big game habitat effectiveness and security as in Alternative 1. This alternative will reduce sediment delivery into streams as in Alternatives 1 and 2 as well as removing the culverts remaining in road 5700 and its spurs. These roads would also be ripped and/or re-contoured to slope to allow for water infiltration and the establishment of vegetation. These actions would take place on the section of road 5700 and its spurs beyond the existing gate at the junction with road 5699. The access restrictions associated with this alternative would be the same as those of Alternative 1. In considering this alternative I studied the condition of road 5700 and its spurs in relation to their stability and also the costs that would be associated with delivering heavy equipment to the site due to the existing washouts. My decision is that these roads will not be ripped and/or re-contoured and we will continue to monitor these roads and take appropriate action when warranted.

Alternative 4 (no action) does not meet the purpose and need. This alternative does not reduce sediment delivery into the streams and does not improve the level of big game habitat effectiveness and security.

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2) Consideration of issues, including comments from the public and other agencies

Scoping for this proposal began in May of 2000. Public comment was solicited by sending letters describing the proposed projects to groups and individuals who had expressed an interest in this project. A legal notice was placed in the local newspaper to notify other interested parties of this proposal and to give them an opportunity to participate. Forest Service personnel representing Water Quality, Fuels and Fire, Forest Products, Silviculture, Vegetation, Cultural Resources, Wildlife, Fisheries, Transportation Systems and Resources (mining, minerals, recreation, range) were also consulted. As a result, three alternatives to the Proposed Action were developed to respond to public as well as internal comment. The Environmental Assessment was completed in May of 2002 and sent to the interested parties allowing 30 days for comment. A legal notice was also placed in the local newspaper to notify other interested parties of the release of this assessment and to give them an opportunity to comment. We received nine (9) responses from groups and individuals with comments specific to this assessment. In addition, two (2) letters that were received by the Forest containing

comment on a wide range of issues relating to travel management were also considered. These 11 responses yielded 163 comments that were identified and addressed by the Interdisciplinary Team. I have considered these comments and my responses to them are contained in the Environmental Assessment in Appendix E.

3) Consistency with the Forest Plan

The Forest Plan delineates Management Areas (MA's) that respond to Forest goals and objectives, and provides management standards to meet those goals and objectives. Management Areas 1, 2, 3a, 3b, 5 and 8a are included in this area. The goals of each management area and standards relating to transportation, wildlife, fisheries, recreation, soils and water and road system are described in the Slate/Hughes Watershed Restoration and Travel Management Environmental Assessment on pages 2 through 4. All action alternatives are responsive to these goals, standards and objectives in varying degrees.

Alternatives 1 and 3 would not meet the numerical Forest Plan standards for Elk Habitat Effectiveness in five of the 24 third order drainages. These alternatives would improve elk security in the area and continue to support and meet the Forest-wide elk objective (EA pg. 26). Therefore I believe this is a reasonable trade-off for the higher level of public access permitted in these alternatives and supports my decision with Alternative 1 to amend the Plan to allow EHE to be maintained at the existing lower levels in this small portion of the project area.

Alternative 2 would meet Forest Plan Standards for Elk Habitat Effectiveness in all third order drainages, but I believe that the travel restrictions associated with this alternative would not provide for reasonable public access into the Hughes Creek and Overwhich Creek drainages. This alternative would not allow access to trailheads in these drainages and access would be limited to the drainage bottoms during the general hunting season. Since Forest Plan elk objectives can continue to be met without such austere restrictions, I choose Alternative 1 instead.

Alternative 4 does not respond to Forest goals and objectives as no action is taken under this alternative. It would not have met the Forest Plan elk habitat effectiveness standard in seven of the 24 third order drainages.

Summary

After I reviewed the alternatives in light of the decision criteria, public comment and the effects analyses, I have decided to implement Alternative 1. The action alternatives all meet the purpose and need as stated in the EA to varying degrees. Alternatives 1 and 2 implement the same level of watershed improvements while Alternative 3 includes additional work on the south side of Overwhich Creek. However, the need for this additional work is not apparent and the cost of delivering the heavy equipment to the area is likely to be prohibitive. I find that Alternative 4 did not meet the purpose and need for

action as stated in the EA. The watershed improvement needs that have been identified, and the travel management necessary to provide big game security would not be implemented. While alternative 2 best meets Forest Plan standards for Elk Habitat Effectiveness, it does not provide for what I consider to be reasonable public access into the area during the general hunting season with access and hunting opportunities being generally limited to the bottoms of the drainages. Alternatives 1 and 3 both improve the Elk Habitat Effectiveness to the same level and require a Forest Plan amendment for implementation as they would not meet Forest Plan standards in 5 third order drainages. These alternatives do however improve Elk Habitat Effectiveness and security over the present levels while allowing for access to trailheads and ridges during the general big game hunting season. I believe that Alternative 1 is the best alternative for implementing the Forest Plan as amended and for meeting the needs of the public. This alternative represents a balanced approach for both motorized and non-motorized recreation activities while protecting the natural resources present.

VI. Finding of No Significant Impact

Provisions of 40 CFR 1508.27(b) indicate project significance must be judged in terms of the project's context and intensity. Based on a review of the provisions, I determine it is not necessary to prepare an environmental impact statement for this project. My rationale includes:

- 1. Context: The effects of the proposed project are localized, with implications for only the immediate area. Cumulative effects of past management, combined with the current proposal, and reasonable foreseeable future actions are displayed in the Slate/Hughes Watershed Restoration and Travel Management EA and the project file. These effects were considered in my determination. Alternative I with a site-specific amendment is consistent with the direction, standards, and guidelines outlined in the Bitterroot Forest Plan, Final EIS, and Record of Decision, as amended by INFISH and the Off-Highway Vehicle decision.
- 2. Intensity: The intensity of activities in the selected alternative are outlined below:
 - a. Impacts that may be both beneficial and adverse: I considered beneficial and adverse impacts associated with the alternatives as presented in Chapter IV of the EA and in the project file. These impacts are within the range of effects identified in the Forest Plan. The overall impact of the selected alternative will be beneficial, with no significant adverse impacts. Impacts from Alternative 1 are not unique to the Slate/Hughes Watershed Restoration and Travel Management project. Previous projects involving similar activities have had non-significant effects. On this basis, I conclude that the specific and cumulative adverse effects of Alternative 1 are not significant.

- b. The degree to which the proposed action affects public health or safety: I have considered the effects of this project on public safety and health and have determined that Alternative 1 will improve these in the long term. Road maintenance funding that would normally be spent on the roads that will be removed from the system or placed in a lower operational maintenance level, will be available for the maintenance of the remaining roads. Existing slumps, seeps and ineffective closures that may currently be unsafe, will be corrected. Any management activity that alters normal traffic patterns will be mitigated with appropriate warning and/or precautionary signing and temporary travel restrictions.
- c. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas: Alternative 1 will not affect ay unique geographic areas, historic features, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. Based on the information in the EA and project file, I conclude there will be no affect on any unique characteristics of the area.
- d. The degree to which the effects on the quality of the human environment are likely to be highly controversial: The anticipated effects associated with the implementation of Alternative 1 are disclosed in the Environmental Assessment in Chapter IV. The basic data and relationships are sufficiently well established in the respective sciences for me to make a reasoned choice between the alternatives, and to adequately assess and disclose the possible adverse environmental consequences. The effects on the quality of the human environment are not likely to be highly controversial.
- e. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks: Alternative 1 is similar to many past actions on the Bitterroot National Forest. Based on the results of past actions and technical and professional insight and experience, I am confident that we adequately understand the effects of watershed restoration and travel management on the human environment. There are no unique or unusual characteristics about the area or selected alternative that would indicate an unknown risk to the human environment (see Chapter IV of the EA).
- f. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration: This project is similar to other watershed restoration and travel management projects on the Bitterroot National Forest and does not set a precedent.

- g. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: The effects from the watershed restoration and travel management activities, when combined with other past, present, and reasonably foreseeable future activities are not expected to have any significant cumulative effects. The selected alternative will have minor specific cumulative effects when added to the existing situation. I looked at the potential cumulative effects discussion in Chapter IV of the EA and found that the cumulative effects from this project would not be significant. With the implementation of the project and project specific mitigation EA pages (12 and 13) there will be no cumulative significant effects.
- h. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources: The proposal meets federal, state, and local laws for protection of historic places. As described in the EA and the project file, historic places have been identified within the analysis area, but will not be affected by project activities.
- i. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973: The Biological Assessments prepared for this project describes the findings for threatened and endangered species. The Biological Evaluation for threatened wildlife species concludes that there will be "No Effect". The Biological Assessment and Evaluation for "Listed" fish species concludes that the project will "Not likely to adversely affect" bull trout. The U.S. Fish and Wildlife Service concurs with this determination.
- j. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment: The proposal meets Federal, State, and local laws for air and water quality, streamside management, riparian areas, cultural resources, and threatened and endangered species. It meets National Forest Management Act requirements, National Environmental Act disclosure requirements, and all other Federal, State, and local laws.

Based on these factors, I conclude that there will be no significant cumulative impacts from implementing the Slate/Hughes Watershed Restoration and Travel Management project as described in Alternative 1.

VII. Findings Required by Law, Regulation, and Agency Policy

My decision is consistent with all laws, regulations, and agency policy. Findings required by major environmental laws are summarized below. Compliance with other laws, regulations, and policies are listed in the EA, the project file, and Forest Plan.

National Forest Management Act (16 U.S.C. 1600 et Seq.)

The National Forest Management Act (NFMA) provides that forest plans "shall be amended in any manner whatsoever after final adoption and after public notice, and, if such amendment would result in a significant change in such a plan, in accordance with subsections (e) and (f) of this section and public involvement comparable to that required by subsection (d) of this section" (16 USC 1604(f)(4)). The Secretary of Agriculture's implementing regulation indicates the determination of significance is to be "based on an analysis of the objectives, guidelines and other contents of the forest plan". The Forest Service has issued guidance for determining what constitutes a "significant amendment" under NFMA. This guidance, in Forest Service Handbook 1909.12, identifies four factors to be used when determining whether or not a proposed change to a forest plan is significant. These factors are: timing; location and size; goals, objectives, and outputs; and management prescriptions.

Timing: The site-specific amendment will become effective immediately. The management activities that will occur as a result of this amendment are planned to begin in August 2002.

This amendment is not significant in terms of the timing of overall changes in the Forest Plan. Revision of the Forest Plan is anticipated to begin in 2003. As stated in FSH 1909.12, Chapter 5.32: "the later the change, the less likely it is to be significant for the current forest plan." This amendment is not significant or incompatible with the upcoming revision plans.

Location and Size: The amended standard applies only to the management practices selected in this decision. The amended standard for elk habitat effectiveness applies to five third order drainages (01C462-1, 01D463-1, 01D464-1, 01D464-3, 01D467-1), totaling 6,360 acres or 15% of the analysis area and 0.4% of the Bitterroot National Forest.

Goals, Objectives and Outputs: The amended standard for this project does not preclude the Forest from attaining the EHE standard as described in the future. This area meets, and will continue to meet after the implementation of Alternative 1, the elk related goals and objectives of the Forest Plan.

Management Prescription: The Forest Plan amendment is site-specific to the Slate/Hughes project. It does not apply to future decisions. The project does not change the desired future condition, objectives, or anticipated goods and services to be produced.

This amendment does not change the management area allocations or the basis for those allocations.

Conclusion: Based on a consideration of these five factors and considering the Bitterroot Forest Plan in its entirety, I have determined that this amendment is not a significant amendment under the National Forest Management Act implementing regulations [CFR 219.10(f)]. This amendment generally maintains or furthers then related Forest Plan goals and objectives.

The National Forest Management Act (NFMA) and accompanying regulations require several specific findings be documented at the project level. I reviewed Alternative 1 with the ID Team and documented the following findings:

- 1. Consistency with the Forest Plan (16 U.S.C. 1604(i)): The Forest Plan set management direction for the Bitterroot National Forest by establishing forest-wide goals, objectives, standards and guidelines. The Plan also establishes goals, standards and guidelines for individual management areas. Implementing projects consistent with this direction is how the Forest moves toward the desired condition described in the Forest Plan. Forest Plan direction provides the sideboards for project planning. In addition, NFMA requires all resource plans and projects are consistent with the Forest Plan (16 U.S.C. 1604(i)). Pages 2 through 4 of the EA highlight the Forest Plan and management area goals and standards that are applicable to the Slate/Hughes Watershed Restoration and Travel Management project. This project is consistent with the Bitterroot National Forest Plan, as amended. Alternative 1 will contribute toward reaching Forest Plan goals and objectives.
- 2. Suitability for Timber Production: This project is not concerned with timber production. This project is in full compliance with NFMA regulations concerning this item.
- Clearcutting and Even-aged Management: This project is not concerned with timber production. This project is in full compliance with the NFMA regulations concerning this item.
- 4. Vegetation Manipulation: All proposals involving vegetation manipulation of tree cover for any purpose must comply with seven requirements found in 36 CFR 219.27(b). Vegetative manipulation associated with this project is designed to establish vegetation within the road prisms of roads that are to be decommissioned, otherwise restricted to travel, or to establish vegetation on user created trails and in dispersed camping areas. This project is in full compliance with NFMA regulations concerning this item.

5. Sensitive Species: Federal law and direction applicable to sensitive species include NFMA and the Forest Service Manual. The Regional Forester approved a list of sensitive plants and animals for which population viability is a concern. In making my decision, I considered the effects on all sensitive species listed as possibly occurring on the Bitterroot National Forest and in the project area. I reviewed the analysis of the projected effects on all sensitive species that may possibly occur in the analysis area. Based on the available information on the distribution, presence or absence for the project area, habitat requirements and management strategies for these species, as well as the project design and location, implementation of the project would have no adverse impact on any sensitive plant or animal species. I concur with the finding documented in the EA and biological evaluations.

The Clean Water Act and State Water Quality Standards

Alternative I will protect beneficial uses including cold-water fisheries. In the bull trout BA, a "Not likely to adversely affect" determination was made. These beneficial uses will be maintained as a result of the application of general and RCHA's and RMO's as described in INFISH, as well as other protective design features and site-specific review of existing conditions. The project will not adversely affect beneficial uses of Slate, Overwhich and Hughes Creeks, and complies with the Clean Water Act and applicable State water quality laws.

The Endangered Species Act (16 U.S.C. 1531 et. Seq.)

This project is in full compliance with the Endangered Species Act. In accordance with Section 7(c) of the Endangered Act, as amended, biologists prepared biological assessments addressing potential impacts to federally listed animals. There are no federally listed plants on the Bitterroot National Forest. The analysis concluded that this project would have "no effect" on grizzly bear, bald eagle, gray wolf, and the Canada lynx.

National Historic Preservation Act

The project is in full compliance with the National Historic Preservation Act. Cultural resource surveys have been completed for the project area. No known cultural resources will be impacted by the selected alternative. The results of the survey were sent to the Montana State Historic Preservation Office as part of our consultation with them. They determined that the project would have no effect on any eligible properties.

Environmental Justice

The selected alternative was assessed to determine whether it would disproportionately impact minority or low-income populations in accordance with Executive Order 12898. No impacts to minority or low-income populations were identified during the scoping or the effects assessment.

VIII. Appeal Provisions and Implementation

This decision is subject to appeal pursuant to 36 CFR 215.7. As stated in 36 CFR 215.11, an appeal may be filed by any person or entity that has provided comment or otherwise expressed interest in a particular proposed action by the close of the comment period specified in 36 CFR 215.6. A written appeal must be submitted within 45 days after the date the notice of the decision is published in the Ravalli Republic Newspaper to:

USDA Forest Service, Northern Region ATTN: Appeals Deciding Officer (RFO) P.O. Box 7669 Missoula, Montana 59807

Appeals must meet content requirements of 36 CFR 215.14. If no appeal is received, implementation of this decision may occur on, but not before, five business days from the close of the appeal filing period. If an appeal is received, implementation may not occur for 15 days following the date of appeal disposition. Detailed records of the environmental analysis are available for public review at the West Fork Ranger District office, 6735 West Fork Road, Darby, Montana 59829. For further information on this decision contact District Ranger David M. Campbell or Jim Aronson at (406) 821-3269.

7/18/02 Date

Lesley W. Thompson

Acting Bitterroot National Forest Supervisor

	HUGHES CRE	<u>, , , , , , , , , , , , , , , , , , , </u>	
Road Number	Existing Travel	Proposed Travel	
310	Open	Open	
5685	Open	Open	
5688	Open	Open	
5693	Open	Open	
5694	Closed Yearlong all Motorized Vehicles	No change	
5696	5.0 miles Open, 2.0 miles closed 10/15 – 12/1 all Motorized Vehicles	No change	
5696A	Closed 10/15 – 12/1 to all Motorized Vehicles	No change	
5793	Closed 10/15 – 12/1 to all Motorized Vehicles	No change	
13404	Open	2.2 closed Yearlong to Highway	
		Vehicles, 10/15 – 12/1 all	
		Motorized	
74182	Closed Yearlong to Highway	Closed Yearlong to Highway	
	Vehicles	Vehicles, 10/15 – 12/1 all	
		Motorized	
74181	Closed Yearlong to Highway	Remove from System	
	Vehicles	No motorized use	
13441	Closed Yearlong to Highway	No change	
	Vehicles, 10/15 - 12/1 to all		
	Motorized Vehicles		
13886	Closed 10/15 – 12/1 to	No change	
-	all Motorized Vehicles		
13438	Closed 10/15 - 12/1 to all	No change	
	Motorized Vehicles		
13439	Closed 10/15 – 12/ 1to all	No change	
	Motorized Vehicles		
74162	Closed Yearlong to Highway	Remove from System	
, 1102	Vehicles	No motorized use	
74164	Closed Yearlong to Highway	Remove from System	
/ TIOT	Vehicles	No motorized use	
74166	Closed Yearlong to Highway Vehicles, 10/15 – 12/1 to all Motorized Vehicles	No change	
74168	Closed Yearlong to Highway	Remove from System	
/4108	Vehicles	No motorized use	
74160	Closed Yearlong to Highway	Remove from System	
74169		No motorized use	
	Vehicles Classify Version at a Highway	No change	
74170	Closed Yearlong to Highway	140 cuange	
	Vehicles, 10/15 – 12/1to all	No change	
74171	Closed Yearlong to all Motorized	No change	
	Vehicles		

Road Number	Existing Travel	Proposed Travel
74172	Closed Yearlong to all Motorized	Remove from System
	Vehicles	No motorized use
74173	Closed Yearlong to all Motorized Vehicles	No change
74179	Closed Yearlong to all Motorized	Remove last 1.0 mile from
	Vehicles	System, No motorized use. First
		1.1 mile no change
74180	Closed Yearlong to Highway Vehicles	No change
74239	Closed Yearlong to Highway	No change
	Vehicles, 10/15 – 12/1 to all Motorized	
74251	Closed Yearlong to all Motorized Vehicles	No change
74252	Closed Yearlong to all Motorized Vehicles	No change
74253	Closed Yearlong to Highway	No change
	Vehicles, 10/15 – 12/1 to all Motorized Vehicles	
74287	Open	Closed Yearlong to Highway
		Vehicles, 10/15 – 12/1 to all Motorized
74289	Closed Yearlong to all Motorized	Remove from System
	Vehicles	No motorized use
74165	Closed Yearlong to Highway	Remove from System
	Vehicles	No motorized use
74176	Closed Yearlong to all Motorized Vehicles	No change
74288	Closed Yearlong to all Motorized	Remove last 1.0 mile from
	Vehicles	System, no motorized use, First
		1.0 mile no change
13437	Closed 10/15 – 12/1 to all Motorized Vehicles	No change
13439-A	Closed 10/15 – 12/1to all Motorized Vehicles	No change
74181	Close Yearlong to Highway	Remove from System
	Vehicles	No motorized use
74167	Close Yearlong to All Motorized Vehicles	No change

OVERWHICH CREEK				
Road Number	Existing Travel	Proposed Travel		
5699	3.0 miles open, 5.2 miles Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to all Motorized Vehicles	No change		
5700	Closed Yearlong to all Motorized Vehicles	1.6 miles Closed Yearlong to all Motorized Vehicles, 4.6 miles Remove from System, no motorized use		
5702	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to all Motorized Vehicles	No change		
5703	Open	No change		
5705	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change		
5706	10.5 miles Open, 1.8 miles Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change		
5706A	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change		
13400	Closed Yearlong to All Motorized Vehicles	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 All Motorized Vehicles		
74183	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to all Motorized Vehicles	No change		
74189	Closed Yearlong to All Motorized Vehicles	Remove from System No motorized use		
74184	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change		
74190	Closed Yearlong to All Motorized Vehicles	No change		
74191	Closed Yearlong to All Motorized Vehicles	No change		
74192	Closed Yearlong to All Motorized Vehicles	Remove from System No motorized use		
74193	Closed Yearlong to All Motorized Vehicles	Remove from System No motorized use		
74194	Closed Yearlong to All Motorized Vehicles	Remove from System No motorized use		
74197	Closed Yearlong to All Motorized Vehicles	No change		

Road	Existing Travel	Proposed Travel
Number		
74198	Closed Yearlong to All Motorized	Remove from System
	Vehicles	No motorized use
74200	Closed Yearlong to All Motorized	No change
	Vehicles	
74201	Closed Yearlong to All Motorized	No change
	Vehicles	
74202	Closed Yearlong to Highway	No change
	Vehicles and 10/15 – 6/15 to All	
	Motorized Vehicles	
74203	Closed Yearlong to Highway	No change
	Vehicles and 10/15 – 6/15 to All	
	Motorized Vehicles	
74204	Closed Yearlong to Highway	No change
	Vehicles and 10/15 – 6/15 to All	
	Motorized Vehicles	
74205	Closed Yearlong to Highway	No change
	Vehicles and 10/15 – 6/15 to All	
	Motorized Vehicles	
74206	Closed Yearlong to Highway	No change
	Vehicles and 10/15 - 6/15 to All	
	Motorized Vehicles	
74207	Closed Yearlong to Highway	No change
	Vehicles and 10/15 – 6/15 to All	
	Motorized Vehicles	
74208	Closed Yearlong to Highway	Remove from System
	Vehicles	No motorized use
74209	Closed Yearlong to Highway	Close Yearlong to All Motorized
	Vehicles and 10/15 – 6/15 to All	Vehicles
	Motorized Vehicles	
74210	Closed Yearlong to Highway	No change
	Vehicles and 10/15 – 6/15 to All	
	Motorized Vehicles	
74211	Closed Yearlong to Highway	Remove from System
' '2'	Vehicles and 10/15 – 6/15 to All	No motorized use
	Motorized Vehicles	110 motorized asc
74212	Closed Yearlong to Highway	Remove from System
17616	Vehicles and 10/15 – 6/15 to All	No motorized use
	Motorized Vehicles	110 motorized use
74213	Closed Yearlong to Highway	No change
17413	Vehicles and $10/15 - 6/15$ to All	110 change
	Motorized Vehicles	
74214		0.6 miles no change 1.5 miles
/ **	Closed Yearlong to Highway Vehicles	0.6 miles no change, 1.5 miles
	Veincles	Remove from System-no
	<u> </u>	motorized use

Road Number	Existing Travel	Proposed Travel
74220	Closed Yearlong to All Motorized Vehicles	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles
74221	Closed Yearlong to All Motorized Vehicles	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles
74222	Closed Yearlong to All Motorized Vehicles	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles
74224	Closed Yearlong to All Motorized Vehicles	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles
74226	Closed Yearlong to All Motorized Vehicles	No change
74756	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change
74199	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change
74225	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change
74196	Closed Yearlong to All Motorized Vehicles	No change
74756	Closed Yearlong to Highway Vehicles and 10/15 – 12/1 to All Motorized Vehicles	No change

SLATE CREEK			
Road Number	Existing Travel	Proposed Travel	
1133	Open	4.8 miles Open, 1.0 mile Closed Yearlong to All Motorized Vehicles	
13810	Open	No change	
13811	Open	Close to All Motorized Vehicles 10/15 – 12/1	
13833	Closed Yearlong to All Motorized Vehicles	No change	
13858	Closed Yearlong to All Motorized Vehicles	No change	

Land and Resource Management Plan

Bitterroot National Forest

1987 Plan

Amendment # 24

Page	Code

Reference Pages: III-49 to III-52 for Management Area 7b; Appendix K-2, Frank Church-River of No Return Wilderness Management Plan (2/85)

Amendment

Replace Appendix K-2, which references the Frank Church -River of No Return Wilderness Management Plan (2/85) with the Frank Church -River of No Return Wilderness Management Plan (12/2003).

Reason for Amendment

Previous direction in the:

- 1. Frank Church-River of No Return Wilderness Management as amended, July 1994;
- 2. Middle Fork of the Salmon River Management Operating Plan (5/20/93); and
- 3. Salmon Wild & Scenic River Management Plan (3/30/82) is now consolidated into a single management plan with corrections, changes and amendments.

Forest Supervisor

Date signed:

Bitterroot National Forest

Land and Resource Management Plan

Bitterroot National Forest

1987 Plan

Amendment #25

Page Code:

Site specific forest plan amendments to the Bitterroot Forest Plan (1987) {FEIS p. 1-12 to 1-15}

Amendment:

The decision includes and amendment that will modify the following Forest Plan standards specifically as they relate to the Middle East Fork decision.

- Forest-wide snag retention standard.
- Forest-wide thermal cover standard.
- Coarse woody debris standards.
- Unsuitable lands standards.

Bitterroot National Forest

David T. Bull
DAVID T. BULL
Forest Supervisor

March 29, 2006
Date Signed:

ATTACHMENT G

Forest Plan Amendment

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ATTACHMENT G FOREST PLAN AMENDMENT

Implementation of Alternative 2-Modified will require site specific forest plan amendments to the Bitterroot Forest Plan (1987) {FEIS p. 1-12 to 1-15}. Therefore, my decision includes an amendment that will modify the following Forest Plan standards specifically as they relate to my Middle East Fork decision.

- > Forest-wide snag retention standard.
- Forest-wide thermal cover standard.
- ➤ Coarse woody debris standards.
- Unsuitable lands standards.

The need for these amendments, in order to meet the purpose and need of the Middle East Fork project was first disclosed in the scoping letter for this project. The information in this Attachment to the Record of Decision (ROD) compliments the analysis in the FEIS regarding these amendments {FEIS p. 1-12 to 1-15, 3.2-61, 3.2-63, 3.5-5, 3.5-48 to 3.5-49, 3.6-21 to 3,6-22, 3.6-23 to 3.6-24, 3.6-30, 3.6-32 to 3.6-34, and 3.6-106 to 3.6-107} and it organizes the information into one location

Section 1926.51 of the Forest Service Directives (www.fs.fed.us/emc/nfma/index5.html) gives guidance for determining what constitutes a "significant amendment" under NFMA. I have determined, based on this guidance, that these site-specific forest plan amendments are not significant because they will not individually or cumulatively significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, they will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period. They modify standards and guidelines, but for this time and place. Therefore, they are not a long term change in the plan. The Forest plan for the Bitterroot is currently being revised. The changes will not have an important effect on the entire forest plan or affect land and resources throughout a large portion of the planning area during the planning period. They will only affect the Middle East Fork area specifically (i.e. a small portion of the Bitterroot National Forest), and only for this project. The public has been notified of these amendments throughout the NEPA process.

For each site-specific amendment this Attachment is organized to:

- > Describe the amendment element
- Explain the purpose and the need for the amendment
- Describe the direct, indirect and cumulative impact of the amendment
- > Apply the Forest Service Handbook criteria for assessing whether or not the amendment is significant, and
- > Display my conclusion on significance or non significance

1.0 SNAGS

1.1 SITE SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following standard" (2.e.(3), FP page II-20):

"All snags that do not present an unacceptable safety risk will be retained."

My decision will clarify and amend this standard, for this project only, to retain the following snags by habitat type group.

Table 1: Proposed Snag Standard

HT Group	Snags
	(average per acre)
A & B	2-5
C, G	4-12
E, F, H	10-15

Habitat Groups are described in Chapter 3, Section 3.2.6 of the FEIS.

Stand level prescriptions by a certified silviculturist and wildlife biologist will provide unit specific snag retention requirements including spatial distribution, species, and snag sizes. Prescriptions will meet the proposed snag standards including the above number of snags retained by habitat type (HT) groups. HT groups are described in the FEIS {p. 3.2-9-3.2-13}. Irregular distribution and small clumps are desirable. All clumps will be less than 4 acres in size unless otherwise agreed to by the wildlife biologist.

1.2 PURPOSE AND NEED OF SNAG STANDARD AMENDMENT

Amendment Purpose:

This site-specific snag standard is meant to clarify the intent of the Forest Plan and to apply the best available information to this project's snag retention design in support of the Plan's and project's goals and objectives (PF-WL-002).

The purpose of the 1987 Forest Plan snag standard is to retain some vertical structure in the regenerated forest (Forest Plan Five Year Review 1994, p. 22, p. 70), in support of the wildlife goals and objectives, while providing a safe working environment. In contrast to some regeneration management practices prior to 1987 where no vertical structure was maintained at all, the standard intended that when conducting clearcuts, seedtree, and shelterwood harvests, some snags would be retained as vertical structure (John Ormiston, personal communication) and biodiversity (Forest Plan Five Year Review 1994, p. 16, Appendix – Detailed Reports p. 2). In the Forest Plan Five Year Review it states that "In order to meet the intent of the Forest Plan to retain some large vertical woody structure, about two trees per acre are needed..." (p. 22). In old growth habitat the Forest Plan has as criteria to consider "snags, generally 1.5 per acres greater than 6 inches dbh and .5 per acre greater than 20 inches" (II-20).

It is clear that the Forest Plan considered and permits fuel reduction activities and salvage of dead or dying trees (FP Record of Decision, 1987). Fuel treatment is discussed in several areas of the Forest Plan (II-7, II-8, II, 28, III-7, III-13, III-20, III-28, III-34, III-38, III-63). The Forest Plan FEIS even specifically discussed the concern of stand replacing fires following mortality from insect epidemics, such as is occurring in the Middle East Fork area, and due to fire suppression (Volume I, p. III-33, IV-22). Salvage is also discussed in multiple areas of the Forest Plan, further supporting that the removal of snags, beyond what is necessary for safety was not only intended but was programmed (FP p. II-20(6), II-20(2), II-22(2), III-8, III-14, III-21, III-29, III-35).

Need for the Amendment:

The amendment is needed for three reasons. First, the current standard, as written, is inconsistent with other objectives in the plan. Secondly, it does not recognize the current condition on the Bitterroot, and; finally, newer scientific information is available than was available in 1987, that will contribute to meeting the Forest Plan's goals and objectives.

The snag standard is inconsistent with other objectives in the Forest Plan, as written, because if you read it by itself, without the context of the rest of the plan, it can be interpreted to mean that no snags (dead trees), other than those that pose safety threats could ever be cut anywhere on the Bitterroot National Forest. In the context of the rest of the Forest Plan, and the information used to develop the Forest Plan, it is clear that that was not the intention of the plan or this standard. It is clear that the plan not only intended for, but actually programmed the removal of snags (salvage harvest, fuel reduction). This site specific project amendment more clearly and explicitly provides for this intention, while meeting wildlife goals and objectives.

Since the drafting of the Forest Plan there is additional scientific understanding of the number of snags that would be expected in different habitat type groups. The Forest Plan did not look at the appropriate number of snags by ecological unit. The project specific standard requires more snags per acre than suggested for consideration in the Forest Plan for old growth habitat, and in the Five Year Review and is within the range expected by more recent science (Harris 1999; Green et al. 1992, errata 2005, p. 9 and 23; USDA 2000; PF-WL-004).

In summary, this amendment to the Forest Plan standard is needed because:

- > The current standard, as written but not as intended, is inconsistent with other plan objectives.
- Does not recognize the current conditions on the Bitterroot National Forest.
- > Does not recognize newer scientific information concerning snags.

1.3 DIRECT, INDIRECT AND CUMULATIVE IMPACT OF MEF SNAG AMENDMENT.

Direct & Indirect:

Because this amendment really just clarifies the intent of the existing standard there is, in essence, no direct or indirect change or effect by implementing this site specific amendment, relative to what could have been implemented under the intent of the Forest Plan snag standard.

Under Alternative 2-Modified approximately 22,900 acres or 89% of the project area would retain all existing snags. Some snags would be felled and removed from the forest on approximately 2,893 acres or 11% of the project area. Treatments reducing snag numbers would include intermediate, sanitation salvage and, salvage/regeneration. Some small dead trees (non-commercial size) could be removed with the slashing prescriptions as well (1,558 acres), but this is not considered an impact on snag habitat. Mitigations for snag retention stated in Attachment A and C of this record of decision would be followed. Mitigations are designed to assure that the number, size and species of snags that are left on site are within the historic ranges for a given habitat type. Intermediate, sanitation salvage and salvage/regeneration treatments would occur on approximately 2,727 acres in habitat type groups A, B, C & G. These habitat types will have snag and down woody components similar to what occurred in stands that developed before fire suppression under historic natural conditions {FEIS p. 3.6-20; PF-WL-004}. The numbers retained would be more than contemplated in the Forest Plan (FP p. II-20; Forest Plan Five Year Review 1994, p. 22). In habitat type groups E, F & H, harvest on approximately 166 acres will result in snag numbers in the lower range of the natural range of variability in order to meet fuel reduction objectives {FEIS p. 3.6-20}. The numbers retained, however, will be more than contemplated in the Forest Plan (FP p. II-20; Forest Plan Five Year Review 1994, p. 22). The dominant fire regime in these cooler, moister habitat types is stand-replacing. Habitats for snag associated wildlife species will be altered by the removal of some snags from the treatment areas; meaning the choices of snags will change. However, snag habitat will still exist. In addition, about 22,900 acres of habitat with snags across the landscape representing all types and size classes will be present in the analysis area. This assures the Forest Plan Objective of maintaining vegetative diversity on land where timber production is a goal of management is accomplished.

It is reasonable to assume that historic levels of snags for a given habitat type would be suitable amounts for snag associated or dependent species. Ponderosa pine will be favored for snag retention, where appropriate. Monitoring of recent vegetation management activities indicates prescriptions for snag retention have consistently been met (PF-WL-008). In the FEIS analysis of the effects of this amendment and snag mitigations it was determined that it would not likely contribute toward a loss of viability to populations or species for the marten and fisher {p. 3.6-42}, pileated woodpecker {p. 3.6-50}, western big-eared bat {3.6-57}, flammulated

owl {3.6-70}, northern goshawk {3.6-79 to 3.6-80} and, black-backed woodpecker {3.6-82}. This shows that this site specific amendment works towards meeting the Forest Plan goal and objective of maintaining habitat to support viable populations of wildlife species.

In summary, Alternative 2-Modified, would reduce the number of snags available to snag associated species, limiting snag choices but not eliminating habitat and it would provide snags within the number expected by habitat type. Vertical diversity within treatment units will be retained. Additionally, the abundance of snags throughout the analysis area assures sufficient habitat for snag dependent or associated species, so viability is not compromised. Monitoring of recent vegetation management activities (Burned area recovery monitoring PF-WL-008) indicates prescriptions for snag retention have consistently been met.

Cumulative Effects:

The number and distribution of snags on the Bitterroot Forest may be at a modern day all time high. The 2000 fires burned over about 307,000 acres of National Forest, creating snags on all or most of the area burned, and only about 10,000 acres have been salvage harvested. Even in the salvage harvest units, approximately as many snags as occurred in historic unburned forests were retained using snag guidelines similar to those in this site specific amendment. Douglas-fir bark beetles have infested over 30,000 acres of the Forest outside Wilderness, and about 20,000 acres of Wilderness lands have beetle infestations. Less than 1,000 acres of beetle killed trees have been harvested, and snags approximating historic numbers have been retained in the harvest units as well.

Snags are abundant and well distributed across the Forest. Even if we don't include the 307,000 acres burned in 2000 or the acres burned in the fires of 2003 and 2005, or the increases due to the Douglas-fir bark beetle epidemic, the estimated average number of snags per acre with diameter at breast height (dbh) between 10.0" and 19.9" is 8.7 snags with a 90% confidence interval of 6.7 to 10 snags per acre. The average number of snags per acre with dbh 20" and larger is 0.9 snags per acre with a 90% confidence interval of 0.6 to 1.2 snags per acre (PF-WL-062). With the abundance of snags available, the Northern Region Snag Management Protocol in place (USDA 2000), and monitoring data that shows we consistently meet snag retention standards (PF-WL-008), every indication is that snag dependent species will have sufficient snag habitat to maintain viability on the Forest.

Appendix B of the FEIS {Volume 2}, displays the past, present and reasonably foreseeable future projects around the Middle East Fork Analysis area. The cumulative effects of these actions, with the actions of Alternative 2-Modified, in particular the implementation of the site-specific snag standard are the same as displayed for Alternative 2 and Alternative 3 in the FEIS {p. 3.6-88}.

This site specific snag amendment will apply to 0.2 percent of the Bitterroot National Forest (2,893 acres). Since the establishment of the Forest Plan in 1987, one other clarification of the snag standard was made for the Burned Area Recovery project. Together with Alternative 2-Modified, the cumulative effects of clarifying the snag standard with this amendment will amount to less than 0.8 percent of the forest, which will be imperceptible when considered at the forest scale.

Snags retained today eventually can become downed woody debris. Cumulatively, by implementing this site-specific standard for snags, and implementing the site specific standard for downed woody debris the areas is expected to still have both snags and downed woody debris as would be expected by habitat type, over time. There is no perceptible cumulative effect of this Forest Plan amendment with the thermal cover amendment and/or the unsuitable land amendment for this project.

1.4 APPLICATION OF FSH 1926.51 DIRECTIVES NOT SIGNIFICANT CRITERIA

Our determination of whether this proposed amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The handbook states that

changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Alternative 2-Modified Snag Standard Amendment
Actions that do not significantly alter the multipleuse goals and objectives for long-term land and resource management.	The snag amendment does not alter the multiple-use goals and objectives for long-term land and resource management at all – let alone significantly alter them. The amendment will provide habitat to support viable wildlife populations and will maintain vegetative diversity on land where timber production is a goal of management. This will be accomplished by providing snags for snag associated or dependent species, in a number that current science suggests would be expected for that habitat type. The amendment affects a tiny portion of the Bitterroot National Forest (less than 0.2 percent). It is a short-term, site-specific and project-specific amendment that will have no effect Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The snag amendment does not adjust management area boundaries or management prescriptions. It does provide for more site-specific application by requiring a range of snags based on habitat types.
3. Minor changes in standards and guidelines.	The snag amendment is a minor change to the standard based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The snag amendment applies more recent science in the implementation of the management prescription that provides an improved ecologically based means of retaining snags.

1.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, I have determined that the adoption of the snag amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

2.0 THERMAL COVER

2.1 SITE SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Forest Plan The Bitterroot Forest Plan includes the following standard" (2.e.(12), FP page II-21):

"Big-game cover/forage relationships, as described in Guides for Elk Habitat Objectives (USDA, 1978), will be a consideration in planning timber management activities."

The Forest Plan Record of Decision (1987, p. 8) more specifically states:

"Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times."

My decision will amend this standard, for this project only, to read:

"Within the Middle East Fork project area treatments will be allowed in Units 2, 237, 238 and 406 that will reduce thermal cover."

2.2 PURPOSE AND NEED OF THERMAL COVER STANDARD AMENDMENT

Amendment Purpose:

The purpose of this site-specific thermal cover standard is to recognize and address the conflicting nature of the Forest Plan's fuels/fire protection goals, objectives and standards for the wildland urban interface and the overlapping winter range thermal cover standard defined in the Forest Plan Record of Decision (1987, p. 8). {FEIS p. 1-13}

Pertinent Forest Plan Objectives (FP II-5, II-7)

- ➤ Cooperate with the States of Idaho and Montana to maintain the current level of big-game hunting and trout fishing opportunities.
- Eliminate backlog fuels.

The Forest Plan objectives for elk management were further defined in the 1992 Montana Elk Management Plan, which documents the Bitterroot National Forest agreements with the Montana Department of Fish Wildlife and Parks.

The purpose of the 1987 Forest Plan Record of Decision thermal cover requirement is to provide habitat that at the time, was believed to be necessary to meet the Forest Plan goals and objectives listed above.

Need for the Amendment:

Thermal cover is analyzed for big game winter range north of the East Fork Bitterroot River constituting a defined herd unit and south of the river constituting another herd unit. Thirty three percent of the winter range south of the East Fork of the Bitterroot River met thermal cover criteria when mapped prior to 2004, which means that winter range meets the 25% thermal cover requirement on the south side of the river. Unit 125 (30 acres), is on the south side of the river. Although thermal cover will be lost in a small portion of this stand, (less than ¼ acre), the requirement of 25% will still be met on the south side of the river. Treatments will not change the existing percentage of thermal cover in the herd unit. Therefore, an amendment is not needed for treatments on the south side of the East Fork of the Bitterroot River.

Thermal cover north of the river is currently at 5%, which means it currently does not meet the 25% requirement. Thermal cover mapping completed prior to 2004 indicates that portions of four treatment units, 2, 237, 238, and 406, which are on the north side of the river, provide thermal cover. The thermal cover within these treatment areas totals 106 acres. In order to qualify as thermal cover stands must have coniferous trees 40 feet or taller and have an average crown closure of 70% or more (FP p. VI-41). The site-specific amendment is needed because in order to meet the goals and objectives of the Middle East Fork project, thermal cover in the herd unit (which currently does not meet the requirement) will be slightly reduced because treatments will

¹ One of these units, Unit 2, has less than ¼ acre currently providing thermal cover.

reduce the crown closure, below 70%, in these three units within the wildland urban interface. Thermal cover after treatment will go from 5% to 4% of the heard unit. As a reminder, the objectives of the project are to:

- Reduce wildland fire threats to the Middle East Fork community.
- Restore fire-adapted ecosystems in the Middle East Fork landscape.
- Restore stands affected by the Douglas-fir bark beetle epidemic by treating infested areas and lands at imminent risk of spread to promote healthy ecosystem function, composition and structure.

Many stands in the Middle East Fork area have experienced the effects of the beetle epidemic, therefore destroying the characteristics that made them thermal cover. It is possible that the effects of the Douglas-fir bark beetle epidemic has reduced the crown closure to below 70% in these four units, and in other stands, since the thermal cover mapping. However, if not, thermal cover will be reduced below existing levels through treatments in these units.

In summary, this amendment to the Forest Plan standard is needed because fuel reduction treatments will reduce the amount of thermal cover on 106 acres of winter range on the north side (southern aspect) of the East Fork of the Bitterroot River.

2.3 DIRECT, INDIRECT AND CUMULATIVE IMPACT OF MEF THERMAL COVER AMENDMENT.

Direct & Indirect:

The effects on thermal cover of Alternative 2-Modified and this amendment are the same as analyzed for Alternative 2 in the FEIS {p.3.6-30}.

The direct effect of Alternative 2-Modified is that 106 acres of thermal cover will be reduced through fuel reduction treatments. All 106 acres are on the north side of the river (south aspect). The open grown ponderosa pine and mixed Douglas-fir, ponderosa pine stands on the warm dry and moderately warm dry slopes on the north side of the river probably never supported enough trees to qualify as thermal cover and certainly in historic landscapes thermal cover did not occupy 25 percent of this elk winter range.

Research conducted since the Forest Plan has questioned the necessity of thermal cover for survival of wintering elk (Cook, et al. 1998). Researchers found "no significant, positive effect of thermal cover on the condition of elk during any of the six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." {p. 3.6-27}. Wintering elk survived and retained body weight better in open areas than in thermal cover. For this reason, whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. In the Middle East Fork, elk numbers are above State goals, in spite of less than 25% thermal cover on the north side of the river.

This means that it is doubtful that the reduction in 106 acres of thermal cover through treatments in Alternative 2-Modified will have an indirect effect on wintering elk. This reduction is not expected to impact the Forest Service's ability to meet the Forest's and State's elk objections. We continue to meet and exceed both within this area and Forest wide. The Montana Fish, Wildlife and Parks has concurred that the loss of thermal cover, through treatments in the Middle East Fork area should not affect elk objectives (FP, p. II-5) (John Vore, pers. comm., 2005, PF-WL-001). {FEIS p. 3.6-30}

Cumulative Effects:

{FEIS 3.6-32}

Since the Forest Plan has been implemented it has become apparent that many portions of winter ranges in the Bitterroot are biologically incapable of producing structure that meets thermal cover. In the Middle East Fork, the south facing slopes of the north side of the East Fork, now have only about five percent of the area in thermal

cover. The fires of 2000 and subsequent bark beetle activity have had a short term effect, but the open grown ponderosa pine, Douglas-fir/ponderosa pine stands on these warm dry slopes probably never supported enough trees to qualify as thermal cover and certainly in historic landscapes thermal cover did not occupy 25 percent of this elk winter range. On the other hand, even after fires and the beetle epidemic, the north facing slopes of the south side of the East Fork has retained about 33 percent thermal cover.

As stated in the thermal cover analysis above, recent research has cast doubt on the necessity for thermal cover as a major component of elk winter range. The history of elk numbers seen on winter ranges in the East Fork, a continuing upward trend and an all time high in 2005, would indicate the recent downward trend in thermal cover as a result of fire, timber harvest and bark beetle attacks has had little affect on the health of the elk herd. This same trend in winter range thermal cover exists forest-wide. Even winter ranges on private land have had reductions in thermal cover as a result of timber harvest and thinning to create defensible space (from wildfires) around structures in the wildland urban interface. In spite of this relatively wide spread reduction of thermal cover, the elk herd in the Valley, as counted by Fish, Wildlife and Parks personnel, has continued to increase.

In most hunting districts of the Bitterroot, the 2004 Elk Management Plan (MT Fish, Wildlife and Parks, 2004) objective is to stabilize or reduce the number of elk on winter ranges. Therefore the slight reduction of thermal cover by management actions in the Middle East Fork will have negligible and discountable effects on thermal cover from a Forest wide perspective and will not likely have a measurable effect on the elk population in MEF or the Bitterroot Valley. Therefore, this amendment will contribute toward meeting the Forest Plan hunting opportunity objective by cooperating with the State of Montana to maintain their hunting opportunity and elk population goals. Elk numbers are so high there is no question or concern for elk viability.

Appendix B of the FEIS {Volume 2}, displays the past, present and reasonably foreseeable future projects around the Middle East Fork Analysis area. The cumulative effects of these actions, with the actions of Alternative 2-Modified, in particular the implementation of the site-specific thermal cover standard are the same as displayed for Alternative 2 in the FEIS {p. 3.6-88}.

Since the establishment of the Forest Plan in 1987, one other similar amendment of the thermal cover requirement was made for the Burned Area Recovery project. Together with Alternative 2-Modified, the cumulative effects of amending the thermal cover requirement with this amendment will have an imperceptible effect when considered at the forest scale because the change in thermal cover is not expected to adversely effect the ability to produce elk in this area and the Forest objective and goals are expected to continue to be met.

There is no perceptible cumulative effect of this amendment in conjunction with the other amendments to the Forest Plan in this project.

2.4 Application of FSH 1926.51 Directives Not Significant Criteria

Our determination of whether this amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are	Alternative 2-Modified Thermal Cover	
Not Significant	Amendment	
Actions that do not significantly alter the multiple- use goals and objectives for long-term land and resource management.	The thermal cover amendment does not alter the multiple-use goals and objectives for long-term land and resource management. In fact, the amendment will continue to provide habitat to support a viable population of elk and big game (viability is not a concern) and will meet the objective of cooperating	

	with Montana Fish Wildlife and Parks to meet their elk population and hunting goals, as confirmed by the agency (John Vore, pers. comm., 2005, PF-WL-001). The amendment affects a small portion of the thermal cover on the north side of the Middle East Fork, (1%) and reduces a tiny portion on the Bitterroot National Forest. It is a short-term, site-specific and project-specific amendment that will have no effect on meeting Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not adjust management area boundaries or management prescriptions. It does provide for more site-specific application by allowing for thermal cover reduction on a site specific basis where population objectives have been met and exceeded.
Minor changes in standards and guidelines.	The thermal cover amendment is a one-time, site-specific and project specific change to allow reduction in thermal cover on four units on winter range (however the reduction on Unit 125 will still meet the standard).
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	For this specific project, maintaining thermal cover can not be achieved at the same time on the same piece of ground while meeting the fuel reduction and restoring fire adapted ecosystem objectives of this project. The purpose and need of this project is consistent with the goals and objectives of the Forest Plan. Even by not meeting the 25% requirement this project will still meet the Forest Plan goals and objectives related to elk (viable populations and cooperating with State goals). These are the goals that the 25% requirement was intended to support.

2.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, I have determined that the adoption of the thermal cover amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

3.0 COARSE WOODY DEBRIS

3.1 SITE SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following Management Area standards relevant to coarse woody debris and the Middle East Fork project:

MA 1, 2, 3a: (FP p. III-6, f. (4); p. III-12, f. (3); p. III-19, f. (4))

> Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for

maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982). ...

MA 2 (FP p. iII-13, j.(2))

Natural and activity fuels will be treated to reduce slash depth below 1 ½ feet to provide for big-game movement. About 25 tons/acre of down trees larger than 6-inch diameter will be left for nongame habitat if available.

The site-specific coarse woody debris standard to be applied for the Middle East Fork project would read:

To maintain soil productivity and meet wildlife objectives, coarse woody debris should be maintained within each Middle East Fork treatment areas at or above the minimum levels identified in the following table and descriptive objectives.

Table 2:	Proposed	Coarse	Woody	Debris	Standards	by .	Habitat Ty _l	pe

HT Group	Coarse Woody Debris
A, B	5-10 tons/acre
C, G	18 tons/acre
E, F, H	14 tons/acre

Habitat Groups are described in the FEIS {Chapter 3, Section 3.2.6}.

These are minimum coarse woody debris amounts to be retained for a given habitat type. They are to be maintained at the treatment area (unit) level rather than on an acre-by-acre scale. To account for the natural variability and potential for each area, site-specific prescriptions will be developed, with appropriate interdisciplinary involvement, to specify the appropriate amount of coarse woody debris (CWD) to leave over and above these minimums.

Retain the recommended woody debris with material generally in larger size classes (greater than 4" in diameter) and well distributed across the treatment area (Graham et al., 1994 and Graham, personal communication 2001). Material greater than 4 inches in diameter can be included in the tons per acre.

Material should also vary by species and by size classes available across the treatment area. Material to be retained for coarse woody debris may or may not be felled to the forest floor. Coarse woody debris material may be left standing and allowed to fall naturally over time.

3.2 Purpose and Need of Woody Debris Standard Amendment

Amendment Purpose:

The purpose of this proposed site-specific standard is two fold. It is intended to apply the best available research and information to this project's coarse woody debris design in support of the Plan's and project's goals and objectives. Secondly, it will eliminate contradicting standard direction. The proposed ecologically based standard would replace the various management area standards in the 1987 Forest Plan. {FEIS p. 1-14}

Intent of the Plan:

Pertinent Forest Plan Goals (FP II-3, FP II-4)

- ➤ Maintain soil productivity....
- > Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (FP II-6, II-7)

- > Design management activities to maintain soil productivity.
- Eliminate backlog fuels.

Need for the Amendment:

Since the drafting of the Forest Plan there is additional scientific understanding of the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al., 1994) providing more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/ac. in one standard and 25 tons/ac. in another standard; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Middle East Fork hazardous fuels reduction project. This amendment also requires coarse woody debris be maintained in Management Area 8b that did not previously have coarse woody debris requirements.

3.3 DIRECT, INDIRECT AND CUMULATIVE IMPACT OF MEF WOODY DEBRIS AMENDMENT.

Direct & Indirect Effects:

For habitat type groups A and B (64% of the treatment units in Alternative 2-Modified), 5-10 tons per acre of downed woody debris would be retained per acre. This overlaps, but is generally less than the 10-15 tons per acre mentioned in the Forest Plan (FP p. III-6, f. (4); p. III-12, f. (3); p. III-19, f. (4)), and the 25 tons per acre mentioned in another part of the plan (FP p. iII-13, j.(2)). The amount of 5-10 tons per acre on these warm dry sites is consistent with the more recent science (Graham et al., 1994). In addition, to reduce fire intensity (flame length and rate of spread), uncharacteristic amounts of coarse woody debris should not be left in stands in the Middle East Fork hazardous fuels reduction project.

Alternative 2-Modified will leave a portion of the existing stand on the site. Yarding will be either whole tree or leave tops attached. These yarding methods will reduce fire potential. Coarse woody residue will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest (Chip Britting, Bitterroot NF, Forester; personal communication). This amount will contribute to maintaining soil productivity. {FEIS p. 3.5-19}. Where units are located close to private lands or within the urban interface (WUI), coarse woody residue amounts will be towards the minimum range for a habitat type found in the table. The proposed fuel treatments will leave slash on the ground through the winter and into late summer/fall (Lee McAlpine; BNF Fuels Specialist; personal communication). This will provide opportunity for the nutrients in the slash to be leached into the soil. The exception will be around homes and campgrounds, where fire is a major concern. In these cases, slash will be treated as soon as possible.

Cumulative Effects

Appendix B of the FEIS {Volume 2}, displays the past, present and reasonably foreseeable future projects around the Middle East Fork Analysis area. The cumulative effects of these actions, with the actions of Alternative 2-Modified, in particular the implementation of the site-specific coarse woody debris standard are the same as displayed for Alternative 2 in the FEIS {p. 3.5-33 to 3.5-47}. In summary, past management practices did not always retain coarse woody debris in quantities considered sufficient today. Today and for the Middle East Fork project, additional emphasis is given to the season of harvest, ensuring that equipment operation are limited to designated areas, and that post-harvest activity does not reduce site and soil productivity. Conservation of soil organic matter and coarse woody residue are considered in every project. The intent is to meet and exceed the BMP's and Soil and Water Conservation Practices outlined in Appendix A. {3.5-44}.

The coarse woody debris amendment allows a quantitative measurement of the amount of coarse woody material to be left by habitat group based on current science. This will occur on less than 0.3 percent of the Bitterroot National Forest (4,938 acres). Since the establishment of the Forest Plan in 1987, one other allowance has been made and that was for the Burned Area Recovery Project in 2001. The Burned Area Recovery coarse woody

material amendment was needed to address soil and site productivity concerns related to harvest following large wildfires and was also based on similar current science. Treatment units within the Fires of 2000 burned comprised approximately 0.6 percent of the Bitterroot National Forest. Together with Alternative 2 of this project, the cumulative effects of modifying the coarse woody material levels will amount to less than one percent of the forest. However, there is no appreciable effect at the site scale, therefore no appreciable effect when considered at the forest scale either. {FEIS p. 3.5-48}.

Cumulatively, by implementing this site-specific standard for coarse woody debris, and implementing the site specific standard for snags the areas is expected to still have both snags and downed woody debris as would be expected by habitat type, over time, fully supporting the Forest goals and objectives. There is no perceptible cumulative effect of this amendment in conjunction with the thermal cover and unsuitable land Forest Plan amendment.

3.4 APPLICATION OF FSH 1926.51 DIRECTIVES NOT SIGNIFICANT CRITERIA

Our determination of whether this amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Alternative 2-Modified Coarse Woody Debris Standard Amendment
Actions that do not significantly alter the multipleuse goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity. By replacing the current Forest Plan Standards with one developed with more recent studies. The amendment affects a tiny portion of the Bitterroot National Forest (less than 0.2 percent). It is a short-term, site-specific and project-specific amendment that will have no effect Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not adjust management area boundaries. It does provide for more site-specific ecologically based management prescription application by requiring a range of coarse woody debris based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to Management Area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science in the implementation of management prescriptions which provides an improved, ecologically based means of retaining coarse woody debris.

3.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, I have determined that the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

4.0 Unsuitable Lands

4.1 SITE SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The site-specific standard to be applied to this decision reads:

"For the Middle East Fork project, vegetation manipulation, including timber harvest or removal, and associated activities are permitted to meet project objectives on unsuitable lands in MA 1, 2, 3a and 8b."

4.2 PURPOSE AND NEED OF UNSUITABLE LANDS STANDARD AMENDMENT

Amendment Purpose:

The 1987 Forest Plan describes management areas in the Middle East Fork area in which the management area or portions thereof, restrict management activities, including the use of "timber harvest" on lands identified as unsuitable for regulated timber management or production. The Middle East Fork project is not proposing timber production on unsuitable lands. However, these management areas also specify harvest that is allowed.

- > salvage harvest to meet management areas goals and standards (MA 1, p. III-5 e. (8) and MA 3a, p. III-18 e. (7)),
- > timber harvest to meet cover/forage objectives (MA 2 at III-11 e.), and
- timber harvest to improve winter range forage production (MA 8b at p. III-62 e. (1)).

The proposed amendment would allow vegetation management, including harvest or removal and associated activities, to be used as a tool within unsuitable lands in management areas 1, 2, 3a, and 8b to accomplish the project objectives. The amendment is consistent with the National Forest Management Act which permits salvage or harvest to protect other multiple-use values within unsuitable lands (16 USC 1604(k)).

The Forest Plan identified portions of MA1, 2, 3a and 8b as unsuitable for timber production due to site limitations regarding tree growth, restocking limitations, or management area objectives; not because timber production would cause irreversible damage (PF-SILV-051, FEIS 3.5-4, 3.-5, Forest Plan Note #207, 5/1987; Forest Plan Note #51, 4/1981, Forest Plan A-1).

Management area 8b is predominately grassland; however, it does include some forested lands. Some of these forestlands within this management area are capable of being managed for timber production, but most are classified as unsuitable to manage for timber production both by virtue of the management area allocation as big game winter range, and also due to inherent site limitations (Forest Plan III-61). Portions of treatment units 1, 38, and 62 in Alternative 2-Modified are within management area 8b and include approximately 170 acres of non-commercial harvest treatments and 84 acres of commercial harvest treatment.

Most of management areas 1, 2, and 3a are forestlands suitable for timber production, but each management area includes parcels (i.e. small inclusions) of unsuitable land (Forest Plan III-3, III-9, and III-15). Some of these inclusions are non-forested but, in the Middle East Fork most of these unsuitable lands include forest lands where fire exclusion has allowed Douglas-fir to encroach, tree growth is inherently slow or where droughty or rocky soils would make it difficult to restock the site in a timely manner. (PF-SILV-051, FEIS 3.5-4, 3.5-5, Forest Plan Note #207, 5/1987; Forest Plan Note #51, 4/1981).

In management areas 1, 2, and 3a, Alternative 2-Modified harvest treatment units 2, 6a, 6b, 10b, 10c, 12a, 15, 24, 26r, 27, 28, 30a, 34r, 40, 44b, 50, 121, 124, 125, 126, 130, 203, 245, 255, and 406 contain minor inclusions of unsuitable lands. Harvest treatment units 1, 3, 29, 29a, 37, 38, 45, 47, 51, 68r, 236, and 238 include higher proportions totaling approximately 700 acres of unsuitable land. In addition, approximately 1,030 acres of unsuitable lands (both forest and grasslands) would be managed through non-harvest treatments (PF-SILV-051). Together with treatments within management area 8b, Alternative 2-modified includes approximately 800 acres of lands not suited for timber production where harvest will be used as a tool to accomplish the project objectives.

4.3 DIRECT, INDIRECT AND CUMULATIVE IMPACT OF MEF UNSUITABLE LANDS AMENDMENT.

Direct. Indirect. and Cumulative Effects

The project related direct, indirect, and cumulative effects of these activities are as described throughout the FEIS and in Appendix A of this Record of Decision. Since the establishment of the Forest Plan in 1987, similar allowances for harvest within unsuitable lands have been made for three other projects totaling approximately 370 acres forest-wide (Forest Plan Monitoring and Evaluation Report, Fiscal Year 2004, pp 15 and 171). None of these have occurred within the MEF analysis area. Given the small total acreage treated and the widely dispersed nature of these activities in time and space, it is highly unlikely the environmental effects of the individual activities have or will interact cumulatively.

From the Forest Plan perspective, the individual and cumulative nature of these amendments will have an almost imperceptible effect on achieving the overall Forest Plan goals, objectives, and desired conditions forest-wide. While the amendments have and will allow for maintenance of desired forest structures and fuel reduction on individual sites, the total harvest treatments within unsuitable lands amount to only about 1,170 acres of the 1,577,900 acre Forest (0.07%) over the 18 year life of the current Forest Plan.

4.4 APPLICATION OF FSH 1926.51 DIRECTIVES NOT SIGNIFICANT CRITERIA

Our determination of whether this element of the proposed amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific element of the amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Alternative 2-Modified Unsuitable Lands Standard Amendment
1. Actions that do not significantly alter the multipleuse goals and objectives for long-term land and resource management.	The unsuitable lands element of the amendment does not alter the long-term multiple-use goals and objectives for resource management in these management areas (within the project area or forest-wide). It does however, in the short-term and only within the treatment areas for this project, add emphasis to the fuel reduction and protection standards through the use of additional types of vegetative treatments, including harvest. Other standards within these Management areas are being met in support of the long term goals and objectives (ROD Section 8.1). The amendment affects a tiny portion of the Bitterroot National Forest (0.05 percent in the Middle East Fork area, 0.07 percent cumulatively). It is a short-term,

	site-specific and project-specific amendment that will have no meaningful effect on overall Forest Plan goals, objectives, or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The unsuitable lands element of the amendment does not adjust management area boundaries. It does provide for more site-specific management prescriptions for this project to achieve multiple-use objectives, but would not result in significant changes in the overall multiple-use goals and objectives of the plan.
3. Minor changes in standards and guidelines.	The unsuitable lands element of the amendment is a minor change to Management Area standards when considered individually and cumulatively with other similar amendments (see above).
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The unsuitable lands element of the amendment allows for the use of timber harvest and other vegetative manipulation methods to achieve objectives other than timber production on a limited basis in this project.

4.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, I have determined that the adoption of the unsuitable lands element of this amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Land and Resource Management Plan

Bitterroot National Forest

1987 Plan

Amendment # 26

Reason for Amendment:

The Reason is to incorporate management direction in the land management plan that conserves and promotes recovery of Canada Lynx, by reducing or eliminating adverse effects from land management activities on National Forest System lands, while preserving the overall multiple-use direction in existing plan (Northerrn Rockies Lynx Management Direction, FEIS, Vol. p.1).

Amendment

Reference the Northern Rockies Lynx Management Direction FEIS and ROD as Amendment 26 to the 1987 Plan.

Link to documents:

http://www.fs.fed.us/r1/planning/lynx.html

DAYID T. BULL

Forest Supervisor

Bitterroot National Forest

Date Signed:

APPENDIX F

FOREST PLAN AMENDMENT

Implementation of Alternative 4 will require a site-specific amendment to the Bitterroot Forest Plan (1987) {FEIS, pp. 1-11 to 1-13} to modify the following Forest Plan standards as they relate specifically to the Trapper Bunkhouse Project:

- ➤ Elk habitat effectiveness
- > Forest-wide thermal cover
- Coarse woody debris

The requirement for a site-specific amendment to meet the Purpose and Need of the Trapper Bunkhouse project was disclosed in the scoping letter (PF-PUBLIC-012). The letter indicated the need for an amendment to modify the following standards: elk habitat effectiveness, forest-wide thermal cover, and snags. When the DEIS was released, it indicated that a site-specific amendment would be required to modify the following standards: forest-wide thermal cover and coarse woody debris. The FEIS noted the need for a site-specific amendment to modify the following standards: elk habitat effectiveness, forest-wide thermal cover, and coarse woody debris. The information in this Appendix compliments the analysis in the FEIS regarding these amendments and it organizes the information into one location

Section 1926.51 of the Forest Service Directives (www.fs.fed.us/emc/nfma/index5.html) provides guidance for determining what constitutes a "significant amendment" under NFMA. Based on this guidance, this site-specific Forest Plan amendment is not significant because it will not individually or cumulatively significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, it will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period. The amendment modifies standards but only for this time and place. Therefore, it is not a long term change in the plan. The Bitterroot Forest Plan is currently being revised. The change will not have an important effect on the entire Forest Plan or affect land and resources throughout a large portion of the planning area during the planning period. It will affect the Trapper Bunkhouse area specifically (i.e. a small portion of the Bitterroot National Forest), and only for this project. The public has been notified of this amendment throughout the NEPA process.

For each site-specific Forest Plan standard modification, this Appendix is organized to:

- > Describe the amendment element
- Explain the purpose and the need for the amendment
- > Describe the direct, indirect and cumulative impact of the amendment
- > Apply the Forest Service Handbook criteria for assessing whether or not the amendment is significant,
- > Display the conclusion on significance or non significance

1.0 ELK HABITAT EFFECTIVENESS (EHE)

1.1 SITE-SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following standard:

"Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) in currently roaded third order drainages. Drainages where more than 25 percent of

roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads had been built" (USDA Forest Service 1987, p. II-21).

The site-specific elk habitat effectiveness standard for the Trapper Bunkhouse project would read: "Existing elk habitat effectiveness will be maintained or improved within the Trapper Bunkhouse area."

1.2 PURPOSE AND NEED OF ELK HABITAT EFFECTIVENESS STANDARD AMENDMENT

Amendment Purpose

The purpose of the site-specific modification is to recognize that the EHE standard is currently not being met in five third-order drainages in the Trapper Bunkhouse Project Area, and will continue not being met in those drainages. However, travel management restrictions proposed in Alternative 4 will improve EHE in four of the five drainages that currently do not meet the Forest Plan standard, and no negative effect to EHE will occur in any of the drainages.

Intent of the Plan

The Forest Plan standard for elk habitat effectiveness (EHE) is to manage roads through the Travel Plan process to attain or maintain 50 percent or higher EHE in currently roaded drainages (those where more than 25% of the potential road system was in place in 1987), and 60 percent or higher EHE in drainages where less than 25% of the roads had been built (USDA Forest Service 1987, p. II-21). EHEs of 50% and 60% equate to 2 miles and 1 mile of open road per square mile, respectively (Lyon 1983). This standard supports the Forest Plan objectives of maintaining habitat to support viable populations of wildlife species and cooperating with the state of Montana to maintain the current level of big game hunting opportunities (USDA Forest Service 1987, p. II-5).

Need for the Amendment

The Purpose and Need of the Trapper Bunkhouse project is not travel planning, however, some changes in road management are included in Alternative 4. Although none of the road changes will negatively affect EHE, and in fact, improvements to EHE will occur in six third-order drainages; five drainages will continue not to meet the EHE standard in the Forest Plan.

The DEIS did not state that a site-specific Forest Plan amendment would be needed for the EHE standard. It clearly showed in the analysis of potential effects of the alternatives that the EHE standard would not be met in five drainages in any of the alternatives, and it also showed that improvements to EHE would be made with both of the action alternatives.

1.3 DIRECT, INDIRECT, AND CUMULATIVE IMPACT OF TRAPPER BUNKHOUSE ELK HABITAT EFFECTIVENESS AMENDMENT

Direct and Indirect Effects

Alternative 4 would implement a number of changes to existing road use. Restrictions on approximately 11.1 miles of roads would change the status of those roads from open to closed for the purposes of EHE calculations, and would thus improve EHE percentages. These roads are listed in the Wildlife section of the FEIS (3.7) in Table 3.7-11. Other road use restrictions would not affect EHE percentages. Table 3.11-2 in the Recreation Section (3.11) of the FEIS contains a complete list of proposed road access changes.

The net effect of these changes would be to improve the existing EHE in six third-order drainages, and maintain the existing EHE in two third order drainage (see Table 3.7-10). The EHE would improve in four of the five drainages that currently do not meet the Forest Plan standard for EHE (Waddell-Bunkhouse, Lower Chaffin, Lower Trapper, and Little Trapper), although none of the four would reach the 50% minimum standard. Elk Habitat Effectiveness would also increase in two drainages that already meet this standard (Little Tin Cup and McCoy Creek).

Increasing EHEs by reducing open road densities in several drainages would make the small elk herds that inhabit the Leavens and Hart Gulch and Spoon/McCoy areas year-round less vulnerable to disturbance from motorized vehicles during the summer, and to mortality from hunters in the fall. Stress to elk resulting from noise created by motorized vehicles would decrease in some areas. This would tend to minimize the potential impacts to elk populations that could result from vegetative treatments that would reduce the amount of hiding cover under this alternative.

Cumulative Effects

Since the Forest Plan standard for EHE was implemented in 1987, many, but not all, of the third-order drainages on the Forest have been brought into compliance with the standard. There are five drainages in the Trapper Bunkhouse analysis area that are currently out of compliance. In spite of not complying with specific Forest Plan standards for EHE, the Forest Plan objective of maintaining the current (1987) level of big-game hunting opportunities has been achieved. The number of hunters, as well as the number of elk, continues to increase, and the general hunting season has remained at five weeks.

None of the ongoing or future projects listed in Appendix B to the FEIS will have a detrimental effect on EHE in any of the third-order drainages within the Project Area. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than EHE analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with the Montana Department of Fish, Wildlife and Parks. In summary, the proposed activities, in combination with past and reasonably foreseeable future actions in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

There is no perceptible cumulative effect of this modification, in conjunction with the course woody debris and forest-wide thermal cover modifications to the Forest Plan proposed in this project.

1.4 APPLICATION OF FSH 1926.51 DIRECTIVES NOT SIGNIFICANT CRITERIA

Our determination of whether this element of the proposed amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The Handbook states that changes to the land management plan that are **not significant** can result from four specific situations. This site-specific element of the amendment is compared to those situations below:

Changes to the Land Management Plan That are	Alternative 4 - Elk Habitat Effectiveness Standard
Not Significant	Amendment
1. Actions that do not significantly alter the multipleuse goals and objectives for long-term land and resource management.	The EHE amendment does not alter the multiple-use goals and objectives for long-term land and resource management. In fact, the amendment will continue to provide habitat to support a viable population of elk and big game (viability is not a concern), and will meet the objective of cooperating with the Montana Department of Fish, Wildlife, and Parks to maintain the current level (1987) of big-game hunting

Changes to the Land Management Plan That are Not Significant	Alternative 4 - Elk Habitat Effectiveness Standard Amendment
	opportunities. The amendment affects five drainages on the Bitterroot National Forest that currently do not meet the standard, and though four of theses drainages will have improvements, none will meet the standard. It is a short-term, site-specific, and project-specific amendment that will have no effect on meeting Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The EHE amendment does not adjust management area boundaries or management prescriptions. It does provide for more site-specific application by allowing for EHE to remain below minimum standards on a site specific basis where population objectives have been met and exceeded.
3. Minor changes in standards and guidelines.	The EHE amendment is a one-time, site-specific, and project-specific change to allow EHE to remain below the standard in five third order drainages.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	For the Trapper Bunkhouse project, meeting EHE standards can not be achieved while allowing reasonable access to the Bitterroot National Forest for the public as shown in the alternative considered but not in detail (FEIS, Section 2.5.3). The purpose and need of the Trapper Bunkhouse project is consistent with the goals and objectives of the Forest Plan. Even by not meeting the EHE standard in the five third order drainages, this project will still meet the Forest Plan goals and objectives related to elk (viable populations and cooperating with State goals). These are the goals that the EHE requirement was intended to support.

1.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, the adoption of the elk habitat effectiveness element of this amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

2.0 FOREST-WIDE THERMAL COVER

2.1 SITE-SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following standard (2.e.(12), USDA Forest Service 1987, p. II-21): "Biggame cover/forage relationships, as described in Guides for Elk Habitat Objectives (USDA 1978), will be a consideration in planning timber management activities."

The Forest Plan Record of Decision (USDA Forest Service 1987, p. 8) more specifically states:

"Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times."

The site-specific thermal cover standard for the Trapper Bunkhouse project would read: "Existing thermal cover will be maintained within the Trapper Bunkhouse treatment units to the extent it does not conflict with meeting the project's objectives."

2.2 PURPOSE AND NEED OF THERMAL COVER STANDARD AMENDMENT

Amendment Purpose

The purpose of this site-specific amendment is to recognize and address the conflicting nature of the Forest Plan's fuels/fire protection goals, objectives and standards for the wildland-urban interface and overlapping winter range thermal cover standard defined in the Forest Plan Record of Decision (USDA Forest Service 1987, p. 8). {FEIS, p. 1-12}

The LRMP, Appendix M-1, directs that fire programs be compatible with the role of fire in ecosystems, including:

- > Using prescribed fire to maintain healthy ecosystems that meet land management objectives.
- Emphasizing fire ecology when applying prescribed fire, and using fire ecology reference documents. Attempting to integrate an understanding of fire's role in regulating stand structure into development of silvicultural prescriptions.

Intent of the Plan

The purpose of the 1987 Forest Plan Record of Decision thermal cover requirement was to provide habitat that, at the time, was believed to be necessary to meet the Forest Plan objectives of maintaining habitat to support viable populations of wildlife species and cooperating with the state of Montana to maintain the current level of big game hunting opportunities (USDA Forest Service 1987, p. II-5).

Need for the Amendment

Approximately 9% of the big game winter range in the Trapper Bunkhouse Project Area currently provides thermal cover, which means the Project Area does not meet the 25% requirement. Thermal cover would be reduced to approximately 6% with the implementation of Alternative 4. Mapping indicates that portions of 10 treatment units (Units 3, 5, 23, 26, 30, 32, 49, 50, 78, and 79) are classified as thermal cover, totaling about 377 acres. In order to qualify as thermal cover, stands must have coniferous trees 40 feet or taller and have an average crown closure of 70% or more (USDA Forest Service 1987, p. VI-41). This site-specific amendment is needed because in order to meet Forest Plan direction related to fire and the Purpose and Need of the Trapper Bunkhouse project, thermal cover (which currently does not meet the requirement) will be slightly reduced. Treatments will reduce the crown closure below 70% on 377 acres in 10 units within the wildland-urban interface. Thermal cover after treatment will go from 9% to 6% of the winter range within the project area.

2.3 DIRECT, INDIRECT, AND CUMULATIVE IMPACT OF TRAPPER BUNKHOUSE FOREST-WIDE THERMAL COVER AMENDMENT

Direct and Indirect Effects

The effects to thermal cover of Alternative 4 and this amendment are analyzed in the FEIS {p. 3.7-22 to 3.7-33}.

The direct effect of Alternative 4 is that 377 acres of thermal cover will be reduced through fuel reduction treatments. The open grown ponderosa pine and mixed Douglas-fir/ponderosa pine stands on the warm-dry and moderately warm-dry slopes probably never supported enough trees to qualify as thermal cover, and certainly in historic landscapes, thermal cover did not occupy 25 percent of this elk winter range.

Research conducted since the Forest Plan was signed has questioned the necessity of thermal cover for survival of wintering elk (Cook, et al. 1998). Researchers found "no significant, positive effect of thermal cover on the condition of elk during any of the six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Wintering elk survived and retained body weight better in open areas than in thermal cover. For this reason, whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. For example, in the Middle East Fork project area, elk numbers are above State goals, in spite of less than 25% thermal cover on the north side of the river.

This means that it is doubtful that the reduction in 377 acres of thermal cover through treatments in Alternative 4 will have a quantifiable effect on observed elk population numbers in the Trapper Bunkhouse project area. The reduction in thermal cover is not expected to impact the Forest's ability to meet the State's elk objectives. We continue to meet or exceed the State's elk objectives in most herd units across the Forest, although numbers in this area have not met the increased objectives established under the 2004 Elk Management Plan (Montana Fish, Wildlife and Parks 2004). The Montana Department of Fish, Wildlife, and Parks has concurred that the loss of thermal cover, through treatments in the Trapper Bunkhouse Project Area, should not effect elk objectives (USDA Forest Service 1987, p. II-5) (PF-WILD-121).

Cumulative Effects

Since the Forest Plan was signed, it has become apparent that many portions of winter ranges in the Bitterroot are incapable of producing and/or sustaining the high canopy closures that provide thermal cover. The vegetative communities on these warm, dry sites were typically dominated by grasses, forbs, shrubs, and relatively open grown ponderosa pine and Douglas-fir/ponderosa pine stands that rarely supported enough trees to qualify as thermal cover. Certainly, in historic landscapes, thermal cover did not occupy 25 percent of elk winter ranges in the Bitterroot drainage. On the other hand, the moister north-facing slopes and riparian areas have retained and provide thermal cover. Most of the thermal cover in winter range that has been identified in the Trapper Bunkhouse Project Area is on north slopes. About 9% of the winter range area is currently classified as thermal cover (PF-WILD-081).

As stated in the thermal cover analysis above, research has cast doubt on the necessity for thermal cover as a major component of elk winter range. The generally upward trend of elk numbers seen on winter ranges in the Trapper Bunkhouse Project Area and across the Forest indicates that the recent downward trend in thermal cover acres across the Forest, and on adjacent private lands, resulting from fires, timber harvest, bark beetle attacks, and thinning to create defensible space around structures in the wildland-urban interface, may have had a beneficial effect on the health of the elk herd, presumably due to increased forage production.

In most hunting districts in the Bitterroot, the 2004 Elk Management Plan (Montana Fish, Wildlife and Parks 2004) objective is to stabilize or reduce the number of elk on winter ranges. Therefore, the slight reduction in thermal cover resulting from management actions with the Trapper Bunkhouse project will have negligible

effect on thermal cover from a Forest-wide perspective, and will not likely have a measurable effect on the elk population in the Trapper Bunkhouse Project Area or the Bitterroot Valley. Therefore, this amendment will contribute toward meeting the Forest Plan objective cooperate with the States of Montana and Idaho to maintain their hunting opportunity and elk population goals. Elk numbers are so high in the Bitterroot drainage and across the range of elk in Montana and the rest of western North America that there is no question or concern for elk viability.

Since the establishment of the Forest Plan in 1987, similar amendments of the thermal cover standard for the Bitterroot National Forest have been made for the Burned Area Recovery (2001) and Middle East Fork (2006) projects. Together with this amendment, the cumulative effects of amending the thermal cover standard will have an imperceptible effect when considered at the Forest scale because the change in thermal cover is not expected to adversely affect the ability to produce elk in this Trapper Bunkhouse Project Area, and the Forest objective and goals are expected to continue to be met.

There is no perceptible cumulative effect of this modification, in conjunction with the course woody debris and elk habitat effectiveness modifications to the Forest Plan proposed in this project.

2.4 APPLICATION OF FSH 1926.51 DIRECTIVES NOT SIGNIFICANT CRITERIA

Our determination of whether this amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are	Alternative 4 - Thermal Cover Standard		
Not Significant	Amendment		
1. Actions that do not significantly alter the multipleuse goals and objectives for long-term land and resource management.	The thermal cover amendment does not alter the multiple-use goals and objectives for long-term land and resource management. In fact, the amendment will continue to provide habitat to support a viable population of elk and big game (viability is not a concern) and will meet the objective of cooperating with the Montana Department of Fish, Wildlife, and Parks to maintain the current level (1987) of big-game hunting opportunities. The amendment affects approximately 30% of the existing thermal cover in the Trapper Bunkhouse Project Area, representing a very small reduction on the Bitterroot National Forest. It is a short-term, site-specific, and project-specific amendment that will have no effect on meeting Forest Plan objectives or outputs.		
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not adjust management area boundaries or management prescriptions. It does provide for more site-specific application by allowing for thermal cover reduction on a site-specific basis where population objectives have been met and exceeded.		

Changes to the Land Management Plan That are Not Significant	Alternative 4 - Thermal Cover Standard Amendment
3. Minor changes in standards and guidelines.	The thermal cover amendment is a one-time, site-specific, and project-specific change to allow reduction in thermal cover in 10 units on winter range.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	For the Trapper Bunkhouse project, maintaining thermal cover cannot be achieved at the same time on the same piece of ground while meeting the fuel reduction and restoration of fire adapted ecosystem objectives. The project's purpose and need is consistent with the goals and objectives of the Forest Plan. Even by not meeting the 25% requirement, the project will still meet the Forest Plan goals and objectives related to elk (viable populations and cooperating with State goals). These are the goals that the 25% requirement was intended to support.

2.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, the adoption of the forest-wide thermal cover amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

3.0 COARSE WOODY DEBRIS

3.1 SITE-SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to coarse woody debris and the Trapper Bunkhouse project:

- MA 1, 2, 3a: (USDA Forest Service 1987, pp. III-6, f (4); III-12, f (3); and III-19, f (4))
 - ➤ Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).
- MA 2 (USDA Forest Service 1987, p. iII-13, j (2))
 - Natural and activity fuels will be treated to reduce slash depth below 1 ½ feet to provide for big-game movement. About 25 tons/acre of down trees larger than 6-inch diameter will be left for nongame habitat if available.

The site-specific coarse woody debris standard to be applied for the Trapper Bunkhouse project would read:

"To maintain soil productivity and wildlife habitat while meeting fuel reduction purpose and needs, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above the minimum levels identified in the following table. Material will be evenly distributed on each acre. At least minimum levels will also be retained after burn treatments. Fire Groups are described in the DEIS, Chapter 3, Section 3.3.3 C.

Proposed Coarse Woody Debris Standard by Fire Group

Fire Group	Coarse Woody Debris
2, 4	5-10 tons/acre
6	10-20 tons/acre
7, 8, 9	8-24 tons/acre

Wood larger than 15 inches in diameter will not be intentionally ignited during hand lighting. It is understood that once the fire is lit by hand crews, the fire may burn into large CWD and combust various pieces."

3.2 PURPOSE AND NEED OF WOODY DEBRIS STANDARD AMENDMENT

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Trapper Bunkhouse project's coarse woody debris design in support of the Forest Plan's and project's goals and objectives. The proposed ecologically-based standard would replace, for this project, the various management area standards in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-6, f(4); III-12, f.(3); and III-19, f(4)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- > Maintain soil productivity
- > Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

> Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science has become available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al., 1994; Brown et al, 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Trapper Bunkhouse Project Area.

3.3 DIRECT, INDIRECT, AND CUMULATIVE IMPACT OF TRAPPER BUNKHOUSE WOODY DEBRIS AMENDMENT

Direct and Indirect Effects

All harvest prescriptions for the Trapper Bunkhouse project would leave a portion of the existing stand on the site. Yarding will be either whole tree or leave tops attached. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. The amounts listed for each Fire Group (see table below) will maintain future soil productivity. Information concerning coarse woody debris is outlined in PF-FIRE-027.

Coarse Woody Debris Requirements for Soil Productivity

Fire Group	CWD
2 and/or 4 = Warm, Dry Ponderosa Pine and Douglas-fir Habitat Types	5 to 10 tons/acre
6 = Cool, Dry and Moist Douglas-fir Habitat Types	10 to 20 tons/acre
7, 8, and/or 9 = Cool Lodgepole Pine and Lower Subalpine Fir Habitat Types	8 to 24 tons/acre

The proposed fuel treatments are anticipated to leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

Cumulative Effects

The CWD requirements for the Trapper Bunkhouse project are discussed in Section 3.6.4.B in the FEIS, and displayed in Table 3.6-3 of the FEIS. The CWD requirements are based on the most current science which varies from the amounts shown in the current Forest Plan. The amended CWD requirements will encompass less than 0.3 percent of the Bitterroot National Forest (based on the maximum treatment area of 5,827 acres in Alternative 4). Since the establishment of the Forest Plan in 1987, two other Forest Plan amendments regarding CWD have been made for the Burned Area Recovery (2001) and Middle East Fork (2006) projects. The Burned Area Recovery Project amendment was necessary to address soil and site productivity concerns related to salvage following large wildfires, and was also based on similar current science. Burned Area Recovery treatments comprised approximately 0.6 percent of the Bitterroot National Forest. The Middle East Fork Project amendment (0.3 percent of the Forest) was needed to ensure CWD retention for fuel reduction treatments were based on current science. These projects, in combination with the Trapper Bunkhouse project, cumulatively amount to approximately 1.2 percent of the Forest. The CWD amendment for this project will not have appreciable cumulative effects at the site or Forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Trapper Bunkhouse Project Area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover and elk habitat effectiveness modifications to the Forest Plan proposed in this project.

3.4 APPLICATION OF FSH 1926.51 DIRECTIVES NOT SIGNIFICANT CRITERIA

Our determination of whether this amendment is significant was done using the process in the Forest Service Planning Handbook, 1926.51 (http://www.fs.fed.us/emc/nfma/index5.html). The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Alternative 4 - Coarse Woody Debris Standard Amendment
1. Actions that do not significantly alter the multipleuse goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies. The amendment affects a small amount of the Bitterroot National Forest (less than 1 percent). It is a short-term, site-specific, and project-specific amendment that will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription applications by requiring a range of coarse woody debris based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science in the implementation of management prescriptions which provides an improved, ecologically based means of retaining coarse woody debris.

3.5 CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in the Forest Service Planning Handbook, 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

- Scattered openings generally less than two acres in size will be created in the thinning units and a few larger openings (up to 12 acres in size) will also be created where patches of decadent lodgepole exist.
- Approximately 1.2 miles of temporary road construction would be required
 to access the lower portion of unit 14. An existing skid trail in unit 2 which
 is currently closed to motorized use would be temporarily re-opened for use
 as a temporary road in this alternative. This temporary road is
 approximately 600 feet in length. The temporary roads would be closed and
 rehabilitated following their use by restoring the natural contour of the
 slope.
- Road maintenance on existing roads would occur in conjunction with the
 harvest operations and would be completed either by the Forest Service or
 included as a requirement in the timber sale contract prior to hauling logs.
 Maintenance will consist of cutting brush, small trees, and other vegetation
 that is encroaching into the road prism. Ditches and cross drains will be
 cleaned and restored to fully functioning condition. The road surface will be
 improved to allow adequate drainage.
- Hauling of logs would occur within the project area, down Forest Road 428 (Ambrose Creek Road) to County Road 1100.
- My decision incorporates the management practices and mitigation measures listed in Appendix A of this document. These features were designed to reduce impacts on resources, enhance resource values, and respond to issues brought up in scoping. These management practices and mitigation measures enable Modified Alternative 3 to meet the purpose and need for action while addressing each of the identified issues. These management practices and mitigation measures will be incorporated into the project design, included as permit or contract requirements, or implemented as normal agency requirements.
- The following two Forest Plan Amendments are proposed as part of my decision. The rationale for these amendments and the environmental effects from implementing them are discussed in detail in the EA on pages 95 100 (EHE) and pages 107 108, 159, 172, 175 (CWM).

Forest Plan Amendment - Elk Habitat Effectiveness (EHE)

A site-specific Forest Plan Amendment will adjust elk habitat effectiveness standards in the Bitterroot Forest Land and Resource Management Plan (standard #14 on page II-21) to current levels in the Haacke-Claremont project area. The reason for this amendment is that the small size of the 3rd order watersheds in this project area unreasonably limits the amount of roads that can be present on the



ground. In order to meet the standards, nearly all roads would need to be closed which conflicts with the Forest Plan management objective to provided roaded, dispersed recreation. The elk habitat effectiveness standards were designed to manage elk habitat at optimum levels. The current elk populations in the Haacke-Claremont area are above Montana Fish, Wildlife, and Parks objectives.

Forest Plan Amendment - Coarse Woody Material (CWM)

A site-specific Forest Plan Amendment will adjust coarse woody material standards in the Bitterroot Forest Land and Resource Management Plan. The site-specific coarse woody material standard to be applied for the Haacke Claremont project on all affected lands would read: In areas where harvest and prescribed burning occur, coarse woody material (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest, at or above the minimum levels identified in the following table. Material will be well distributed across all acres.

Proposed Coarse Woody Material Standard by Fire Group

Fire Group (FG)	Coarse Woody Material
Warm, Dry Ponderosa Pine and Douglas-fir (FG-2 & 4)	5-10 tons/acre
Cool, Dry or Moist Douglas-fir (FG-5, 6)	10-20 tons/acre
Cool SitesUsually Dominated by Lodgepole Pine (FG-7) Dry, Lower Subalpine (FG-7) Moist, Lower Subalpine (FG-9)	8-24 tons/acre

This site-specific standard is intended to apply the best available research and information to this project's coarse woody material design in support of the Plan's and project's goals and objectives. The proposed ecologically based standard would replace the various management area standards in the 1987 Forest Plan (f.(4) at FP p. III-6; f.(3) at FP-p. III-12; j.(2) at FP p. III-13; and f.(4) at FP p. III-19).

With this decision, the Forest Service will begin to: Reduce fuel loading throughout Haacke and Claremont Creeks, especially along the National Forest and private land boundary; reduce tree densities in both young, regenerated timber stands and mature stands to improve forest growth; and provide forest products, jobs, and income to the local economy.



Three of the letters provided information or requested that the EA address certain resource concerns. The project file (PF#E- Scoping Responses 2 & 3) includes a chart on how these concerns were addressed in the EA.

The comments from the public and other agencies were used to identify a list of issues. I determined that the significant issues for this project were roads, wildlife habitat, and fuel management. To address these issues, the Forest Service developed the alternatives described above.

On February 25, 2008, a legal advertisement announcing the availability of the Environmental Assessment and requesting comment was placed in the Ravalli Republic, the newspaper of record for the Bitterroot National Forest. Two letters of comment were received (PX#G -1,2). A synopsis of the comments and the Forest Service Response to those comments are attached as Appendix C of this document.

DETERMINATION OF NON-SIGNIFICANCE FOR THE SITE-SPECIFIC FOREST PLAN AMENDMENT

I have determined that the Forest Plan Amendments included as part of this decision are not significant amendments under the National Forest Management Act implementing regulations [CFR 219.10(f)]. In reaching this conclusion, I considered the following factors [from Forest Service Handbook (FSH) 1909.12-Chapter 5.32]:

Timing: The site-specific amendments will become effective following appropriate public notification and completion of procedures for administrative review of the decision. The management activity that will occur as a result of this amendment is planned to occur no sooner than the summer of 2008.

The National Forest Management Act requires that Forest Plans be revised at least every 15 years. The Bitterroot Forest Plan has been in effect for more than 20 years and is currently in the revision process. This amendment is not significant or incompatible with those efforts at the Forest Plan Revision level.

This amendment does not change the management area allocation or suitable land base.

Location and Size: These site-specific amendments:

- adjust the level of coarse woody material (CWM) to be retained within treatment units, and
- adjust the elk habitat effectiveness (EHE) standards to the existing level in the Haacke-Claremont project area.



The CWM amendment will affect approximately 922 treatment acres or less than 1% of the total acres suitable for timber management on the Bitterroot National Forest. Similarly, EHE is changed on two third order drainages that encompass a total of 2,361 National Forest acres, which is also less than 1% of the total acres suitable for timber management on the Forest. The calculations of EHE are strongly influenced by the small size of these two drainages and amount of National Forest within the drainages. When compareed to the almost 1.6 million acres that make up the Bitterroot National Forest these two amendments represent a inconsequential amount of change.

Goals, Objectives, and Outputs: As disclosed in the Haacke-Claremont Vegetation management EA, the project will assist in meeting Bitterroot Forest Plan Goals and Objectives. Adjustments in CWD and EHE should have no measurable affect on the level of goods and services projected by the Forest Plan.

Management Prescription: The Forest Plan amendments are site specific. They do not apply to future decisions. The project does not change the desired future condition of the Forest Plan, Forest Plan objectives, or the anticipated goods and services to be produced as described in Chapter II of the Plan.

Based on these determinations, I conclude that the site-specific Forest Plan amendment is of minor consequence when considered in the context of the Forest Plan and does not constitute a significant change.



SITE-SPECIFIC BITTERROOT NATIONAL FOREST PLAN AMENDMENT

Implementation of Alternative 3-modified will require a site-specific amendment to the Bitterroot Forest Plan (1987) (FEIS p. 1-11 to 1-13) Appendix F. Therefore, my decision includes an amendment that will modify the following Forest Plan standards specifically as they relate to the Lower West Fork decision:

- ➤ Elk habitat effectiveness
- > Forest-wide thermal cover
- Coarse woody debris

Please see Appendix F of the FEIS for more detailed information pertaining to this amendment. Section 1926.51 of the Forest Service Directives (www.fs.fed.us/emc/nfma/index5.html) gives guidance for determining what constitutes a "significant amendment" under NFMA. I have determined, based on this guidance, that this site-specific forest plan amendment is not significant because it will not significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, it will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period. The amendment modifies standards and guidelines in the analysis area for the Lower West Fork project. Therefore, it is not a long term change in the plan. The public has been notified of this amendment throughout the NEPA process.

FOREST PLAN CONSISTENCY

The Bitterroot National Forest Plan (Forest Plan) provides general management direction for the Forest, and establishes Forest-wide and management area standards and guidelines (USDA Forest Service 1987, Chapter II). Management activities are to be consistent with the Forest Plan (16 USC 1604 (i)).

I have evaluated the consistency of the alternatives with Forest Plan standards. Alternative 3-modified is consistent with the Forest Plan, meets Forest Plan standards, as amended, and will contribute toward reaching Forest Plan goals and objectives. Consistency with these standards can be found throughout the FEIS (pgs. 3.2-3 to 3.2-5 3.3-3 – 3.3-5, 3.3-22, 3.4-13, 3.5-45 – 3.5-46, 3.6-41 - 3.6-45, 3.7-34, 3.8-65 – 3.8-67, 3.9-11, 3.10-14 to 3.10-15, 3.11-5, 3.12-19). The Biological Evaluations and Biological Assessments confirm that this project will not impact the viability of sensitive, or threatened and endangered species. (FEIS pgs. 3.7-32 – 3.7-33, 3.8-68, 3.10-13 - 3.10-14.

8.1.2 NATIONAL ENVIRONMENTAL POLICY ACT

NEPA requires Federal agencies to: (a) use a systematic interdisciplinary approach in planning and decision making; (b) consider the environmental impact of proposed actions; (c) identify adverse environmental effects which cannot be avoided should the proposal be implemented; (d) consider alternatives to the proposed action; (e) consider relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity; and (f) identify any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

I find that the Lower West Fork analysis process and documentation is consistent with NEPA. The CEQ provides NEPA guidance for government agencies, and interprets regulations on cumulative effects as; requiring analysis and a concise description of the identifiable present effects of past actions to the extent that they are relevant and useful in analyzing whether the reasonable foreseeable effects of agency proposal for action and its alternatives may have a continuing additive and significant relationship to those effects. The CEQ regulations do not require agencies to catalog and analyze all individual past actions. Information about past actions that may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decisionmaking (CEQ 2005). However, I directed the Lower West Fork ID Team to catalog past harvest, road construction, and grazing activities and their effects, which is documented in Appendix B of the FEIS.

APPENDIX F

FOREST PLAN AMENDMENT

Implementation of the preferred Alternative requires site-specific forest plan amendments to the Bitterroot Forest Plan (1987) {FEIS p. 1-12 to 1-15}. Therefore, an amendment will be needed that will modify the following Forest Plan standards specifically as they relate to the Lower West Fork Project.

- Elk habitat effectiveness standard
- > Forest-wide thermal cover standard.
- Coarse woody debris standards.

The need for these amendments to meet the purpose and need of the Lower West Fork project was disclosed in the Notice of Intent (12/2007). This Appendix contains information that compliments the coarse woody debris, thermal cover, and elk habitat effectiveness analyses in the FEIS.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a "significant amendment" under NFMA. Based on this guidance, these site-specific forest plan amendments are not significant because they will not individually or cumulatively significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, they will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendments modify standards and guidelines, specific to the Lower West Fork project. Therefore, they are not a long term change in the plan. The Bitterroot Forest Plan is currently being revised. The public has been notified of these amendments throughout the NEPA process.

The amendment analyses are organized to:

- > Describe the amendment element
- > Explain the purpose and the need for the amendment
- > Describe the direct, indirect and cumulative effects of the amendment
- > Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant
- > Display the conclusion on significance or non-significance.

ELK HABITAT EFFECTIVENESS

SITE-SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following resource and Management Area (MA) standards relevant to elk habitat effectiveness and the Lower West Fork project:

Forest-wide wildlife resource standards: (USDA Forest Service 1987, pp. II-21, e (14))

Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

MA 1, 2, 3a, 3b, 3c, 8a: (USDA Forest Service 1987, pp. III-4, c (4); III-10, c (4); III-17, c (4); III-25, c (11); III-31, c (4); III-59, c (2))

Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards in Chapter II (Lyon, 1983).

The site-specific elk habitat effectiveness (EHE) standard for the Lower West Fork project would read:

All roaded 3rd order drainages in the Lower West Fork analysis area will attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) except

in five drainages. Elk habitat effectiveness will be maintained or improved in the five 3rd order drainages as shown below:

Elk Habitat Effectiveness in Five 3rd Order Drainages in the Lower West Fork Analysis Area

3 rd Order Drainage	Elk Habitat Effectiveness
02e424-1	43 %
02f427-3	47 %
02h449-1	43 %
02h450-2	44 %
02i450 -1	48 %

PURPOSE AND NEED OF ELK HABITAT EFFECTIVENESS STANDARD AMENDMENT

Amendment Purpose

The proposed standard amendment is intended to acknowledge that the EHE standard cannot be met without closing access trailheads or roads needed for forest management access in five 3rd order drainages in the Lower West Fork analysis area. In this analysis area, the proposed standard would replace the various management area standards in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-4, c (4); III-10, c (4); III-17, c (4); III-25, c (11); III-31, c (4); III-59, c (2)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)

- > Provide habitat to support viable populations of native and desirable non-native wildlife and fish.
- > Design transportation systems and road management programs that are responsive to public concerns and protect resource goals.

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)

- Maintain habitat to support viable populations of wildlife species.
- > Cooperate with the State of and Montana to maintain the current level of big-game hunting opportunities.

Need for the Amendment

This site-specific amendment is needed in the Lower West Fork analysis area as the EHE standard cannot be met in five, 3rd order drainages without conflicting with additional resource goals and objectives. In 02e424-1, 02f427-3, 02449-1, 02h450-2, or 02i450-1 drainages, 50 percent EHE cannot be met without closing road that access trailheads or are needed for forest management purposes.

DIRECT, INDIRECT, AND CUMULATIVE IMPACT OF LOWER WEST FORK ELK HABITAT EFFECTIVENESS AMENDMENT

Direct and Indirect Effects

Under this amendment, none of the drainages inside of the Lower West Fork analysis area would decrease in elk habitat effectiveness. All areas will either maintain the current EHE level or move towards meeting the Forest Plan standard. No new permanent roads will be created or opened as a result of this amendment, and we will still be meeting related Forest Plan Goals and Objectives. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks.

Cumulative Effects

The EHE requirements and levels for the Lower West Fork project are discussed in Section 3.8.5.C in the FEIS, and displayed in Table 3.8-5 of the FEIS. The understanding of road density and its influence on

EHE has changed with more research and strict adherence to road density may not be the most important factor in providing effective elk habitat. The amended EHE requirements for this project will involve less than 0.1 percent of the 3rd order drainages on the Bitterroot National Forest. Since the establishment of the Forest Plan in 1987, four other similar site-specific amendments of the EHE standard have been made:

Year	Number of 3 rd Order Drainages	Environmental Document	Ranger District
1997	2	Camp Reimel EA	Sula
2001	3	Burned Area Recovery EIS	Darby, Sula, West Fork
2002	5	Slate Hughes Watershed Restoration & Travel Management	West Fork
2008	5	Trapper-Bunkhouse EIS	Darby

The cumulative effect of amending the EHE standard in the Lower West Fork analysis area in addition to these previous EHE amendments would be imperceptible at the Forest scale. Many of the 3rd order drainages are within 10 percent of the EHE standard and the Bitterroot Valley elk population is stable. The MTFWP rates elk security in HD 250 as good to excellent because of the rugged terrain, road closures, and roadless and Wilderness areas that provide opportunities to evade hunters. Bitterroot Forest Plan objective and goals would continue to be met.

None of the ongoing or reasonably foreseeable future projects listed in Appendix B would further reduce EHE in any of the third order drainages within the analysis area. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. In summary, the proposed actions, in combination with past and reasonably foreseeable future actions in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

Cumulatively, by implementing this site-specific standard for elk habitat effectiveness, the Lower West Fork project area is expected to have appropriate levels of secure habitat for elk, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover and coarse woody debris modifications to the Forest Plan proposed in this project.

APPLICATION OF FSM 1926.51 "NOT SIGNIFICANT" CRITERIA

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Elk Habitat Effectiveness Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (about 1.5 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not adjust management area boundaries.
3. Minor changes in standards and guidelines.	The amendment reduces elk habitat effectiveness between 2 and 7% below Forest Plan standard in 5 of 19 3 rd order drainages in the Lower West Fork Analysis area. This reduction is a minor change to management area standards when considered in the context of surrounding drainages with optimum elk habitat effectiveness. Over the whole analysis area, road densities vary between 1.2 and 2.2 mi/mi² in Alternative 2 to 1.0 and 2.0 mi/mi² in Alternative 3.
4. Opportunities for additional projects or activities that will contribute to achievement of the	The elk habitat effectiveness amendment allows access to forest areas that are needed for
management prescription.	management requirements.

CONCLUSION -- SIGNIFICANCE/NON-SIGNIFICANCE

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the elk habitat effectiveness amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

THERMAL COVER

SITE-SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following Forest-wide resource standard relevant to thermal cover and the Lower West Fork project:

1987 Forest Plan Record of Decision (USDA Forest Service 1987, p. 8)

➤ "Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times."

The site-specific thermal cover standard to be applied for the Lower West Fork project would read:

"Thermal cover on winter range will be treated in the Lower West Fork analysis area to the extent needed to protect the overstory from loss due to fire in parts of 20 units (Fig. F-1)."

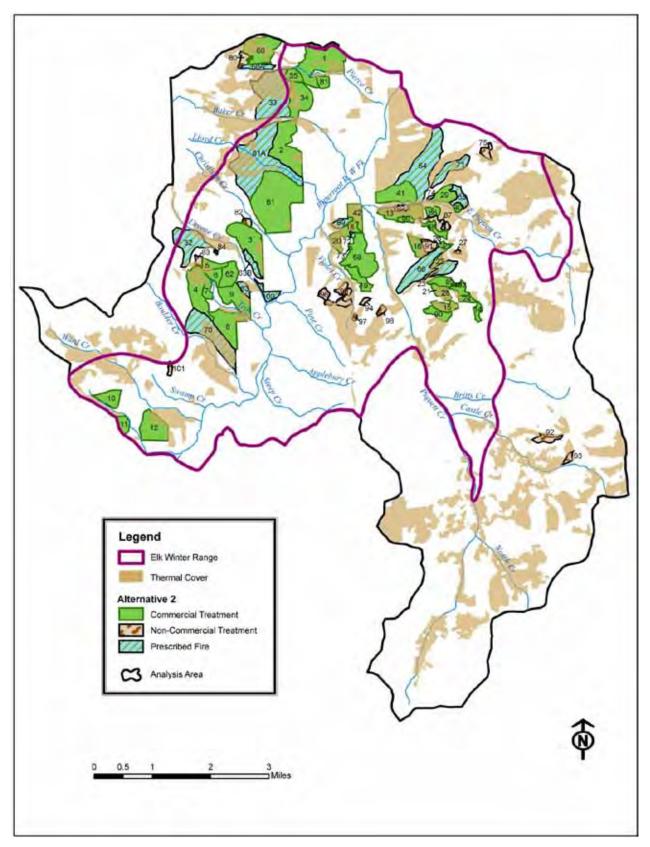


Figure F-1: Winter Range Thermal Cover and Proposed Treatment Units in the Lower West Fork Analysis Area.

PURPOSE AND NEED OF THERMAL COVER STANDARD AMENDMENT

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Lower West Fork project's thermal cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives. The proposed, ecologically-based standard would replace, for this project, the various management area standards in the 1987 Forest Plan ROD (USDA Forest Service 1987, p. 8).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)

➤ Provide habitat to support viable populations of native and desirable non-native wildlife and fish.

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)

- Maintain habitat to support viable populations of wildlife species.
- ➤ Cooperate with the State of and Montana to maintain the current level of big-game hunting opportunities.

Need for the Amendment

Historically, low intensity fires burned more area in habitat type groups A and B and impeded the development of thermal cover on elk winter range. Decades of fire suppression increased thermal cover, which decreased big game forage. The relatively small scale of the timber harvest together with fire exclusion allowed the development of more thermal cover than was typical in these habitat types, creating an overstory that allowed large, uncharacteristic fires to burn. In the last decade, fires have reduced thermal cover on winter range by 54 percent in the Lower West Fork analysis area. This proposed site-specific amendment recognizes and addresses the conflicting nature of the Forest Plan's fuels and fire protection goals, objectives and standards for the WUI and the overlapping winter range thermal cover standard defined in the Forest Plan Record of Decision (1987, pg. 8).

DIRECT, INDIRECT, AND CUMULATIVE IMPACT OF LOWER WEST FORK THERMAL COVER AMENDMENT

Direct and Indirect Effects

There will be a decrease in the amount of thermal cover; however, it is not expected to affect the elk population in a way that would compromise their viability. All units in winter range in the Lower West Fork project area would be thinned only to the extent needed to protect the overstory from loss in a fire. Protecting the overstory would ensure the presence of thermal cover in the future. Currently, the thermal cover in winter range is 4% below the standard. The proposed amendment would bring the level of thermal cover to only 7% below the standard. In HD 250, thirty-five percent of the area (250 miles²) is winter range; 86 percent of which is on public land. Elk appear to use winter range on private land disproportionately more than public land (Montana Statewide Elk Management Plan 2004).

Cumulative Effects

Research conducted since the Forest Plan was signed questions the necessity of thermal cover for survival of wintering elk (Cook, et al. 1998). Researchers found "no significant, positive effect of thermal cover on the condition of elk during any of the six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Wintering elk survived and retained body weight better in open areas than in thermal cover. For this reason, whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. For additional information, refer to Chapter 3, Section 3.8.5.C.

No reasonably foreseeable actions in the analysis area would further reduce thermal cover in the Lower West Fork analysis area. Outside of the analysis area, three percent of the winter range thermal cover would be treated in the Trapper-Bunkhouse project. Trapper-Bunkhouse treatments are expected to reduce winter range thermal cover to six percent. Though the Lower West Fork project maintains more thermal cover than that in Trapper-Bunkhouse (17% in Alternative 2 and 20% in Alternative 3), it would not compensate for the low amount of thermal cover in Trapper-Bunkhouse. However, thermal cover on winter range does not appear to be as important to elk winter survival as was once thought (Cook et al. 1998). Treatments proposed in the Lower West Fork project would maintain open forest canopies and improve forage productivity in the understory, which may offset the loss of thermal cover (Lehmkuhl et al. 2002, Poole and Mowat 2005).

Cumulatively, by implementing this site-specific standard for thermal cover, the Lower West Fork project area is expected to have appropriate levels of thermal cover on winter range, over time, and fully support the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific coarse woody debris and elk habitat effectiveness modifications to the Forest Plan proposed in this project.

APPLICATION OF FSM 1926.51 "NOT SIGNIFICANT" CRITERIA

Our determination of whether this amendment is significant was done using the process in FSM 1926.51.

Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to maintain quality elk habitat by replacing the current Forest Plan Standard with one developed based on recent studies. The amendment affects a small area of the Bitterroot National Forest (about 1.5 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription by preventing massive canopy loss by thinning out overgrown forest stands. The thermal cover amendment is a minor change to
3. Minor changes in standards and guidelines.	management area standards. At most, the project would reduce thermal cover to 7% below standard. Current research indicates that thermal cover is not as important to wintering elk as early research indicated.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	Developing thermal cover requires time and maintaining forest cover over time. The thermal cover amendment allows thinning in thermal cover that improves the probability of retaining the forest canopy in a fire. Fire is more likely to burn at lower intensities in the thinned stands. No other projects are scheduled in the Lower West Fork analysis area that would reduce or enhance thermal cover development. Though not meeting the 25% requirement, this project will meet the Forest Plan goals and objectives related to elk (viable populations and cooperating with State goals). These are the goals that the 25% requirement was intended to support.

The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations above:

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the thermal cover amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

COARSE WOODY DEBRIS

SITE-SPECIFIC AMENDMENT PROPOSED FOR THIS STANDARD

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to coarse woody debris and the Lower West Fork project:

MA 1, 2, 3a: (USDA Forest Service 1987, pp. III-6, f (4); III-12, f (3); and III-19, f (4))

➤ Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

MA 2 (USDA Forest Service 1987, p. iII-13, j (2))

Natural and activity fuels will be treated to reduce slash depth below 1 ½ feet to provide for biggame movement. About 25 tons/acre of down trees larger than 6-inch diameter will be left for nongame habitat if available.

The site-specific coarse woody debris standard to be applied for the Lower West Fork project would read:

"To maintain soil productivity and wildlife habitat while meeting fuel reduction purpose and needs, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above the minimum levels identified in the following table. Material will be evenly distributed on each acre. At least minimum levels will also be retained after burn treatments. Fire Groups are described in the DEIS, Chapter 3, Section 3.2-3 A.

Proposed Coarse Woody Debris Standard by Fire Group

Fire Group	Coarse Woody Debris
2, 4	5-10 tons/acre
6	10-20 tons/acre
7, 8, 9	8-24 tons/acre

Wood larger than 15 inches in diameter will not be intentionally ignited during hand lighting. It is understood that once the fire is lit by hand crews, the fire may burn into large CWD and combust various pieces."

PURPOSE AND NEED OF WOODY DEBRIS STANDARD AMENDMENT

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Lower West Fork project's coarse woody debris design in support of Forest Plan and project goals and objectives.

The proposed, ecologically-based standard would replace, for this project, the various management area standards in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-6, f(4); III-12, f (3); and III-19, f(4)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- ➤ Maintain soil productivity
- Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

> Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science has become available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al., 1994; Brown et al, 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Lower West Fork project area.

DIRECT, INDIRECT, AND CUMULATIVE IMPACT OF LOWER WEST FORK WOODY DEBRIS AMENDMENT

Direct and Indirect Effects

All harvest prescriptions for the Lower West Fork project would leave a portion of the existing stand on the site. Yarding will be either whole tree or leave tops attached. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. The amounts listed for each Fire Group (see table below) will maintain future soil productivity. Information concerning coarse woody debris is outlined in PF-FIRE-027.

Coarse Woody Debris Requirements for Soil Productivity

course in configuration and some for some from the some		
Fire Group	CWD	
2 and/or 4 = Warm, Dry Ponderosa Pine and Douglas-fir Habitat Types	5 to 10 tons/acre	
6 = Cool, Dry and Moist Douglas-fir Habitat Types	10 to 20 tons/acre	
7, 8, and/or 9 = Cool Lodgepole Pine and Lower Subalpine Fir Habitat Types	8 to 24 tons/acre	

The proposed fuel treatments would to leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

Cumulative Effects

The CWD requirements for the Lower West Fork project are discussed in Section 3.5.4.B in the DEIS, and displayed in Table 3.5-5 of the DEIS. The CWD requirements are based on the most current science which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.1 percent of the Bitterroot National Forest (based on maximum treatment area of 2,494 acres in Alternative 2). Since the establishment of the Forest Plan in 1987, two other forest plan allowances have been made which include the Burned Area Recovery Project in 2001 and the Middle East Fork Project in 2006. The Burned Area Recovery CWD amendment was needed to

address soil and site productivity concerns related to salvage following large wildfires and was also based on similar current science. Burned Area Recovery treatments comprised approximately 0.6 percent of the Bitterroot National Forest. The Middle East Fork project amendment (0.3 percent of the forest) was needed to ensure CWD retention for fuel reduction treatments were based on current science. Additional amendments have been included for the recent Trapper Bunkhouse FEIS and Haacke Claremont EA. These amendments in combination with Alternative 2 of this project (maximum treatment area) cumulatively amount to approximately 1.5 percent of the Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Lower West Fork project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover and elk habitat effectiveness modifications to the Forest Plan proposed in this project.

APPLICATION OF FSM 1926.51 "NOT SIGNIFICANT" CRITERIA

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Coarse Woody Debris Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies.
	The amendment affects a small area of the Bitterroot National Forest (about 1.5 percent). This short-term, site- specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site	The coarse woody debris amendment does not adjust management area boundaries. It provides for more site-
analysis when the adjustments do not cause significant	specific, ecologically-based management prescription
changes in the multiple-use goals and objectives for long- term land and resource management.	applications by requiring a range of coarse woody debris based on habitat types.
Term faile and resource management.	The coarse woody debris amendment is a minor change
3. Minor changes in standards and guidelines.	to management area standards based on more recent
	science.
4. Opportunities for additional projects or activities that	The coarse woody debris amendment applies more recent
will contribute to achievement of the management prescription.	science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Appendix B: Forest Plan Amendment

Implementation of Alternatives 2 and 3 in the Larry-Bass project requires site specific forest plan amendments to the Bitterroot Forest Plan (1987) (Larry-Bass EA p.3). The amendment modifies the following Forest Plan standards specifically as they relate to the Larry-Bass Project.

- Forest-wide thermal cover standard.
- Coarse woody debris standards.

The need for these amendments to meet the purpose and need of the Larry-Bass project was disclosed during initial project scoping (Sept. 2010). This Appendix contains information that compliments the coarse woody debris, and thermal cover analyses in the EA.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a "significant amendment" under NFMA. Based on this guidance, these site-specific forest plan amendments are not significant because they will not, individually or cumulatively, significantly alter the long-term relationship between levels of multiple-use goods and services originally projected in the Forest Plan. Also, they will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendments modify standards and guidelines, specific to the Larry-Bass project area. Therefore, they are not a long-term change in the plan. The public has been notified of these amendments during the NEPA process.

The amendment analyses are organized to:

- > Describe the amendment element
- > Explain the purpose and the need for the amendment
- Describe the direct, indirect and cumulative effects of the amendment
- Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant
- > Display the conclusion on significance or non-significance.

Thermal Cover

Proposed Thermal Cover Site-Specific Amendment

The Bitterroot Forest Plan includes the following Forest-wide resource standard relevant to thermal cover and the Larry-Bass project:

1987 Forest Plan Record of Decision (USDA Forest Service 1987, p. 8)

"Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times."

The site-specific thermal cover standard applied to the Larry-Bass project would read:

"Thermal cover on winter range will be treated in the Larry-Bass project area to the extent needed to protect the overstory from loss due to mountain pine beetle infestation (Fig. B-1)."

Purpose and Need of Thermal Cover Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Larry-Bass project's thermal cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives. The proposed, ecologically based standard would replace, for this project, the standard in the 1987 Forest Plan ROD (USDA Forest Service 1987, p. 8).

Intent of the Plan

- Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)
- Provide habitat to support viable populations of native and desirable non-native wildlife and fish.
- Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)
- Maintain habitat to support viable populations of wildlife species.
- Cooperate with the State of Montana to maintain the current level of big-game hunting opportunities.

Need for the Amendment

This proposed site-specific amendment recognizes and addresses the conflicting nature of the Forest Plan's vegetation protection goals, objectives, and standards for both commercial timber stands and developed recreation sites, and the overlapping winter range thermal cover standard defined in the Forest Plan Record of Decision (1987, p. 8). Research conducted since the Forest Plan was signed questions the necessity of thermal cover for survival of wintering elk (Cook et al. 1998). Researchers found "no significant, positive effect of thermal cover on the condition of elk during any of the six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Wintering elk survived and retained body weight better in open areas than in thermal cover. Based on this and other more current research (refer to Wildlife section in Chapter 3 of the Larry-Bass EA), thermal cover does not appear to be necessary for individual elk survival or elk population viability.

Effects of Larry-Bass Thermal Cover Amendment

Direct and Indirect Effects

Thermal cover will decrease from 12% to 9% in the project area under Alternatives 2 and 3; however, in the analysis area that includes the broader winter range (Fig. B-1) thermal cover will decrease from 23 % to 22%. Though this percent of thermal cover is below the percentage anticipated in the Forest Plan ROD, it is not expected to compromise elk population viability. All units in winter range in the Larry-Bass project area would be thinned to the extent needed to protect the overstory against mountain pine beetle infestation. Protecting the overstory would ensure the presence of thermal cover in the future.

Cumulative Effects

Since the Forest Plan was signed, it has become apparent that many portions of winter ranges in the Bitterroot are incapable of producing and/or sustaining the high canopy closures that provide thermal cover. The vegetative communities on these warm, dry sites were typically dominated by grasses, forbs, shrubs and relatively open grown ponderosa pine and Douglas-fir/ponderosa pine stands that rarely supported enough trees to qualify as thermal cover. It is most likely that thermal cover did not occupy 25 percent of elk winter ranges in the Bitterroot drainage.

As stated above, research conducted since the Forest Plan was signed questions the necessity of thermal cover for survival of wintering elk (Cook, et al. 1998). Researchers found "no significant, positive effect of thermal cover on the condition of elk during any of the six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Wintering elk survived and retained body weight better in open areas than in thermal cover. For this reason, whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. For additional information, refer to Wildlife section in Chapter 3 of the Larry-Bass EA

In most hunting districts of the Bitterroot, the 2004 Elk Management Plan (MT Fish, Wildlife and Parks, 2004) objective is to stabilize or reduce the number of elk on winter ranges. The slight reduction of thermal cover by management actions in the Larry Bass Project Area will have negligible and discountable effects on thermal cover from a Forest wide perspective and will not likely have a measureable effect on the elk population in the Bass-Sweeny Creek drainage or the Bitterroot Valley. Therefore, this amendment will contribute toward meeting the Forest Plan objective of cooperating with MTFWP to maintain their hunting opportunity and elk population goals.

Since the establishment of the Forest Plan in 1987, similar amendments of the thermal cover standard for the Bitterroot National Forest have been made for the Burned Area Recovery (2001), Middle East Fork (2006) and Trapper Bunkhouse (2008) projects. The amended thermal cover standard for this project will be needed on 27 acres of the 139,420 acres of thermal cover present on the Forest (less than 0.001%). Previous Forest Plan amendments in combination with Alternative 2 of this project cumulatively amount to 0.68 percent of the thermal cover on the Bitterroot National Forest. On a Forest wide scale, 28% of elk winter range is considered thermal cover. This meets the Forest Plan standard. The modifications of the thermal cover requirements for this project will not have appreciable cumulative effects at the site or forest scale.

No reasonably foreseeable actions would further reduce thermal cover in the Larry-Bass project area. The prescribed burn planned in the larger Larry Bass area would be low intensity and not likely to kill trees 40 feet tall. In addition, ladder fuels would be reduced through this proposed thinning project and tree crowns would not overlap. Therefore, there is very low potential that the prescribed fire would burn into the forest canopy.

No timber harvests are proposed in the areas adjacent to the Larry-Bass project area in the reasonably foreseeable future.

There is no perceivable cumulative effect of this amendment and the coarse woody debris amendment to the Forest Plan proposed in this project.

Application OF FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to maintain quality elk habitat by replacing the current Forest Plan Standard with one developed based on recent studies.

Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
	The amendment affects a small area of the Bitterroot National Forest (less than 1 percent). This site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not adjust management area boundaries. It provides for a more site-specific, ecologically-based management prescription, which thins the forest to prevent the loss of large diameter ponderosa pine from mountain pine beetle infestation.
3. Minor changes in standards and guidelines.	The thermal cover amendment is a minor change to management area standards based on more recent science. The project area is in a fire group type that typically doesn't support thermal cover to the level determined in the Forest Plan ROD. In the project area, thermal cover would be reduced from 12% to 9%. On a larger scale that includes adjoining winter range with more diverse habitat types and fire groups, thermal cover is 23% of the winter range. Thinning in the Larry-Bass project would reduce it to about 22%.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The thermal cover amendment applies more recent science to management prescriptions and provides an ecological basis for thinning in thermal cover. Though not meeting the 25% requirement, this project will meet the Forest Plan goals and objectives related to elk (viable populations and cooperating with State goals). These are the goals that the 25% requirement was intended to support.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the thermal cover amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Coarse Woody Debris

Proposed Coarse Woody Debris Site-Specific Amendment

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to coarse woody debris and the Larry-Bass project:

MA 3a: (USDA Forest Service 1987, pp. III-19, f (4))

Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

The site-specific coarse woody debris standard to be applied for the Larry-Bass project would read:

"To maintain soil productivity and wildlife habitat while meeting fuel reduction purpose and needs, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above 5-10 tons/acre in Fire Group 4. Material will be evenly distributed on each acre. At least minimum levels will be retained after prescribed fire treatments." (Fire Groups are described in the Larry-Bass EA Chapter 3).

Purpose and Need of Woody Debris Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the coarse woody debris design of the Larry-Bass project and support goals and objectives in Forest Plan and project proposal. For this project, the proposed, ecologically-based standard would replace the management area standard in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-19, f(4)).

Intent of the Plan

- Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)
- Maintain soil productivity
- Design fire management programs that are consistent with other resource goals (Appendices K and M)
- Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)
- Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Larry-Bass project area.

Effects of the Larry-Bass Coarse Woody Debris Amendment

Direct and Indirect Effects

All harvest prescriptions for the Larry-Bass project would leave a portion of the existing stand on the site. The harvested tree would be either whole-tree yarded to the landing or the tree would be processed in the forest and the logs would be carried to the landing on a forwarder. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. Five to 10 tons/acre in Fire Group 4 will maintain future soil productivity (PF-SOIL-008).

Cumulative Effects

The CWD requirements for the Larry-Bass project are discussed in the soils section of Chapter 3 in the Larry-Bass EA. The CWD requirements are based on the most current science, which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.05 percent of the Bitterroot National Forest (based on maximum treatment area of 861 acres). Since the 1987 Forest Plan, forest plan amendments have been made to adjust CWD levels.

Site-specific forest plan amendments were needed to ensure CWD retention in fuel reduction treatments were based on current science. Previous forest plan amendments in combination with Alternative 2 of this project cumulatively amount to 1.9 percent of the Bitterroot National Forest (PF-SOILS-010). The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Larry-Bass project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover modification to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Coarse Woody Debris Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies.
	The amendment affects a small area of the Bitterroot National Forest (about 0.05 percent). This site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or	The coarse woody debris amendment does not adjust
management prescriptions resulting from further on-site	management area boundaries. It provides for more site-
analysis when the adjustments do not cause significant	specific, ecologically-based management prescription
changes in the multiple-use goals and objectives for	applications by requiring a range of coarse woody debris
long-term land and resource management.	based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Appendix B: Forest Plan Amendment

Implementation of Alternatives 2 in the Three Saddle project requires site specific forest plan amendments to the Bitterroot Forest Plan (1987) (Three Saddle EA p.1-12). The amendment modifies the following Forest Plan standards specifically as they relate to the Three Saddle Project.

Elk Habitat Effectiveness standards.

Coarse woody debris standards.

The need for these amendments to meet the purpose and need of the Three Saddle project was disclosed in the EA (August. 2011). This Appendix contains information that complements the elk habitat effectiveness and coarse woody debris analyses in the EA.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a "significant amendment" under NFMA. Based on this guidance, these site-specific forest plan amendments are not significant because they will not, individually or cumulatively, significantly alter the long-term relationship between levels of multiple-use goods and services originally projected in the Forest Plan. Also, they will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendments modify standards and guidelines, specific to the Three Saddle project area. Therefore, they are not a long-term change in the plan. The public has been notified of these amendments during the NEPA process.

The amendment analyses are organized to:

Describe the amendment element

Explain the purpose and the need for the amendment

Describe the direct, indirect and cumulative effects of the amendment

Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant Display the conclusion on significance or non-significance.

Elk Habitat Effectiveness (EHE)

Elk Habitat Effectiveness Site-Specific Amendment

The Bitterroot Forest Plan includes the following Forest-wide resource standard relevant to elk habitat effectiveness and the Three Saddle project:

The Forest Plan standard for elk habitat effectiveness (EHE) states, "Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) in currently roaded third order drainages. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built." In five third order drainages of the project area, EHE is not meeting Forest Plan standards.

Proposed Standard

The elk habitat effectiveness (EHE) standard that would only apply to the Three Saddle project would be:

➤ "All roaded 3rd order drainages in the Three Saddle analysis area will attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) except in the five drainages explained below. Elk

habitat effectiveness will be maintained or improved in the five 3rd order drainages as shown below:"

Proposed Elk Habitat Effectiveness in Five 3rd Order Drainages in the Three Saddle Analysis Area

3 rd Order Drainage	<u>Drainage Name</u>	Elk Habitat Effectiveness (%)
07a106-1	Slocum	34
09b103-1	Ambrose	46
09b104-1	Grayhorse-Wheelbarrow	54
09b105-1	Spring Gulch	25
09c106-1	Threemile	26

Purpose and Need of EHE Standard Amendment

Amendment Purpose and Need

The standard amendment is intended to acknowledge the EHE standard cannot not be met in five 3rd order drainages in the Three Saddle Project analysis area. The proposed standard would replace, for this project, the various management area standards in the 1987 Forest Plan (USDA Forest Service 1987). The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)

- > Provide habitat to support viable populations of native and desirable non-native wildlife and fish.
- > Design transportation systems and road management programs that are responsive to public concerns and protect resource goals.

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)

- Maintain habitat to support viable populations of wildlife species.
- Cooperate with the State of and Montana to maintain the current level of big-game hunting opportunities.

Discussion

This site-specific amendment recognizes that the EHE standard is not currently being met in five, 3rd order drainages in the Three Saddle analysis area. The roads proposed for storage or decommissioning in these third order drainages improves EHE in 09b104-1 and 09c106-1 but they do not change EHE in 07a106-1, 09b103-1 and 09b105-1. Table B-1 displays the amount of road closure needed to meet the EHE standard (PF-ROAD-004).

Table B-1. Amount of Road Closure needed by Third Order drainage to meet EHE standard

3 rd Order Drainage	Drainage Name	Miles of Road Closure needed to meet Forest Plan EHE Standard*
07a106-1	Slocum	0.5
09b103-1	Ambrose	2.00
09b104-1	Grayhorse- Wheelbarrow	1.3
09b105-1	Spring Gulch	5.4
09c106-1	Threemile	11

^{*}All numbers are approximate

Based on the Roads Analysis (PF-ROAD-002) that was done by the Three Saddle ID team, it was determined that in order to meet the goals and objectives of the Bitterroot Forest Plan within the Three Saddle Project area, the proposed plan amendment was necessary. Please see the Wildlife Section 3.7 of Chapter 3 for a more detailed discussion on EHE.

Effects of Three Saddle EHE Amendment

Direct and Indirect Effects

Alternative 2 would implement changes to the existing travel status of several roads. Road use restrictions on approximately 2.3 miles of existing roads would change the status of those roads from open to closed for the purposes of EHE calculations. These closures would improve the EHE percentage in the Threemile Creek drainage and the Grayhorse-Wheelbarrow drainage, although the resulting EHE percentage would still not meet the Forest Plan standard in either drainage. These roads are listed in Table B-2. Other road use restrictions would not affect EHE percentages.

Table B-2: Restrictions to Motorized Use in Alternatives 2 that Improve EHE

Road No.	Distance (mi.)	Description
640	1.6	Decommission
62368	0.6	Decommission
73896	0.1	Decommission
Total Miles	2.3	

Under this amendment, none of the drainages inside of the Three Saddle Project analysis area would decrease in elk habitat effectiveness. All areas will either maintain the current EHE level or move towards meeting the Forest Plan standard. No new permanent roads will be created or opened as a result of this amendment, and Forest Plan Goals and Objectives will still be met. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks

Cumulative Effects

The EHE requirements and levels for the Three Saddle project are discussed in Wildlife Section in the EA. The understanding of the role EHE played in elk security has changed over the years and is now not thought to be the most important factor in providing effective elk habitat. Since the establishment of the Forest Plan in 1987, six other similar site-specific amendments of the EHE standard have been made:

Year	Number of 3 rd Order Drainages	Environmental Document	Ranger District
1997	2	Camp Reimel EA	Sula
2001	3	Burned Area Recovery EIS	Darby, Sula, West Fork
2002	5	Slate Hughes Watershed Restoration & Travel Management	West Fork
2008	5	Trapper-Bunkhouse EIS	Darby
2008	2	Haacke Claremont EA	Stevensville
2010	5	Lower West Fork EIS	West Fork

The cumulative effect of amending the EHE standard in the Three Saddle Project analysis area in addition to these previous EHE amendments would be imperceptible at the Forest scale. Many of the 3rd order drainages are within 10 percent of the EHE standard and the Bitterroot Valley elk population is stable. Elk security in Three Saddle project area is close to or above the recommended levels (Section 3.7.3D in the EA). The Bitterroot Forest Plan objective and goals would continue to be met.

None of the ongoing or reasonably foreseeable future projects listed in Appendix A would further reduce EHE in any of the third order drainages within the analysis area. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. In summary, the proposed actions, in combination with past and reasonably foreseeable future actions in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

Cumulatively, by implementing this site-specific standard for elk habitat effectiveness, the Three Saddle project area is expected to have appropriate levels of secure habitat for elk, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover and coarse woody debris modifications to the Forest Plan proposed in this project.

Application OF FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Elk Habitat Effectiveness Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (about 1.6 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not adjust management area boundaries.
3. Minor changes in standards and guidelines.	The elk habitat effectiveness amendment is a minor change to management area standards based on more recent science.
Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The elk habitat effectiveness amendment allows access to forest areas that are needed for management requirements.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the elk habitat effectiveness amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Coarse Woody Debris

Proposed Coarse Woody Debris Site-Specific Amendment

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to coarse woody debris and the Three Saddle project:

MA 1, 2, 3a: (USDA Forest Service 1987, pp. III-6, f (4); III-12, f (3); and III-18, f (4))

Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

MA 2 (USDA Forest Service 1987, p. III-13, j (2))

Natural and activity fuels will be treated to reduce slash depth below 1 ½ feet to provide for biggame movement. About 25 tons/acre of down trees larger than 6-inch diameter will be left for nongame habitat if available.

The site-specific coarse woody debris standard to be applied for the Three Saddle project would read:

"To maintain soil productivity and wildlife habitat while meeting fuel reduction purpose and needs, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above the minimum levels identified in the following table. Material will be evenly distributed on each acre. At least minimum levels will also be retained after burn treatments. Fire Groups are described in the EA, Chapter 3, Section 3.2.2.

Proposed Coarse Woody Debris Standard by Fire Group

Fire Group	Coarse Woody Debris	
Warm, Dry Ponderosa Pine and Douglas-fir (FG-2 & 4)	5-10 tons/acre	
Cool, Dry or Moist Douglas-fir (FG-5, 6)	10-20 tons/acre	
Cool Sites Usually Dominated by Lodgepole Pine (FG-7)		
Dry, Lower Subalpine (FG-7) Moist, Lower Subalpine (FG-9)	8-24 tons/acre	

Wood larger than 15 inches in diameter will not be intentionally ignited during hand lighting. It is understood that once the fire is lit by hand crews, the fire may burn into large CWD and combust various pieces."

Purpose and Need of Woody Debris Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Three Saddle project's coarse woody debris design in support of Forest Plan and project goals and objectives. The proposed, ecologically-based standard would replace, for this project, the various management area standards in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-6, f(4); III-12, f.(3); and III-19, f(4)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- Maintain soil productivity
- Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science has become available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al., 1994; Brown et al, 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Three Saddle project area.

Effects of the Three Saddle Project Coarse Woody Debris Amendment

Direct and Indirect Effects

All harvest prescriptions for the Three Saddle project would leave a portion of the existing stand on the site. Yarding will be either whole tree or leave tops attached. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. The amounts listed for each Fire Group (see table below) will maintain future soil productivity.

Coarse Woody Debris Requirements for Soil Productivity

Fire Group	CWD
Warm, Dry Ponderosa Pine and Douglas-fir (FG-2 & 4)	5-10 tons/acre
Cool, Dry or Moist Douglas-fir (FG-5, 6)	10-20 tons/acre
Cool Sites Usually Dominated by Lodgepole Pine (FG-7)	9 24 tons/25ro
Dry, Lower Subalpine (FG-7) Moist, Lower Subalpine (FG-9)	8-24 tons/acre

The proposed fuel treatments would to leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

Cumulative Effects

The CWD requirements for the Three Saddle project are discussed in Section 3.8.3. in the EA, and displayed in Table 3.8-3 of the EA. The CWD requirements are based on the most current science which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.1 percent of the Bitterroot National Forest (based on maximum treatment area of 2,149 acres in Alternative 2). Since the establishment of the Forest Plan in 1987, two other forest plan allowances have been made which include the Burned Area Recovery Project in 2001 and the Middle East Fork Project in 2006. The Burned Area Recovery CWD amendment was needed to address soil and site productivity concerns related to salvage following large wildfires and was also based on similar current science. Burned Area Recovery treatments comprised approximately 0.6 percent of the Bitterroot National Forest. The Middle East Fork project amendment (0.3 percent of the forest) was needed to ensure CWD retention for fuel reduction treatments were based on current science. Additional amendments have been included for the recent Trapper Bunkhouse FEIS, Haacke Claremont EA, Lower West Fork FEIS and the Larry Bass EA. These amendments in combination with Alternative 2 of this project (maximum treatment area) cumulatively amount to approximately 2.0 percent of the Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Three Saddle project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific elk habitat effectiveness modifications to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Coarse Woody Debris Standard Amendment
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies.

	The amendment affects a small area of the Bitterroot National Forest (about 1.6 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription applications by requiring a range of coarse woody debris based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives

Appendix A: EHE Forest Plan Amendment Darby Lumber Lands

Implementation of Alternative B Final Proposed Action in the Darby Lands project requires a site specific forest plan amendment to the Bitterroot Forest Plan (1987) (Darby Lumber Lands EA Sec. 1.7.3, 3.5.7, 3.5.8). The amendment modifies the following Forest Plan standards specifically as they relate to the Darby Lumber Lands Project.

Elk Habitat Effectiveness Standards

The need for this amendment to meet the purpose and need of the Darby Lumber Lands project was disclosed in the EA (January, 2015). This Appendix contains information that complements the elk habitat effectiveness analyses in the EA.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a "significant amendment" under NFMA. Based on this guidance, this site-specific forest plan amendment is not significant because it will not, individually or cumulatively, significantly alter the long-term relationship between levels of multiple-use goods and services originally projected in the Forest Plan. Also, the amendment will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendment modifies standards and guidelines, specific to the Darby Lumber Lands project area. Therefore, this is not a long-term change in the Bitterroot Forest Plan. The public has been notified of this amendment during the NEPA process.

The amendment analysis is organized to:

- Describe the amendment element
- Explain the purpose and the need for the amendment
- Describe the direct, indirect and cumulative effects of the amendment
- Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant
- Display the conclusion on significance or non-significance.

Elk Habitat Effectiveness (EHE)

Elk Habitat Effectiveness Site-Specific Amendment

The Bitterroot Forest Plan includes the following Forest-wide resource standard relevant to elk habitat effectiveness and the Darby Lumber Lands project:

The Forest Plan standard for elk habitat effectiveness (EHE) states, "Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) in currently roaded third order drainages. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built." In seven third order drainages of the project area, EHE is not meeting Forest Plan standards.

Existing Elk Habitat Effectiveness in Seven 3rd Order Drainages that do not currently meet the EHE standard in the Darby Lumber Lands Area

3 rd Order Drainage	<u>Drainage Name</u>	Existing EHE (%)	Plan Standard
04f259-1	Rye Cr. Poke Trib.	35.5	50
04f259-2	Rye Cr. Headwaters	44	50
04f262-1	N. Fk. Rye Headwaters	21.5	60
04f263-1	Cathouse Cr.	38	60
04f263-2	Fox Cr.	44.5	50
04f264-2	Middle Rye Cr.	32	50
04f265-2	Rye Cr. Bear Gulch	48	50

Proposed Standard

The elk habitat effectiveness (EHE) standard that would only apply to the Darby Lumber Lands project would be:

"All roaded 3rd order drainages in the Darby Lumber Lands analysis area will attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) except in the seven drainages explained below. Elk habitat effectiveness will be maintained or improved in the six 3rd order drainages as shown below:"

Proposed Elk Habitat Effectiveness in five 3rd Order Drainages in the Darby Lumber Lands Analysis Area

3 rd Order Drainage	Drainage Name	Elk Habitat Effectiveness (%)
04f259-1	Rye Cr. Poke Trib (part)	43
04f262-1	NF Rye Headwaters (part)	30.5
04f263-1	Cathouse Cr.	44.5
04f263-2	Fox Cr.	46.5
04f264-2	Middle Rye Cr. (part)	40
04f265-2	Rye Cr. Bear Gulch (part)	48

The 3rd order drainage 04f259-2 (Rye Cr. Headwaters) will be brought into compliance with Alternative B FPA, therefore it is not included in the proposed new standard.

Purpose and Need of EHE Standard Amendment

Amendment Purpose and Need

The standard amendment is intended to acknowledge that EHE standard cannot not be met in six 3rd order drainages in the Darby Lumber Lands Project analysis area. The proposed standard would replace, for this project, the various management area standards in the 1987 Forest Plan (USDA Forest Service 1987). The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)

- Provide habitat to support viable populations of native and desirable non-native wildlife and fish.
- > Design transportation systems and road management programs that are responsive to public concerns and protect resource goals.

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)

- Maintain habitat to support viable populations of wildlife species.
- Cooperate with the State of and Montana to maintain the current level of big-game hunting opportunities.

Discussion

This site-specific amendment recognizes that the EHE standard is not currently being met in seven 3rd order drainages in the Darby Lumber Lands analysis area. The roads proposed for storage or decommissioning in these third order drainages improves EHE in 04f259-1, 04f262-1, 04f263-1, 04f263-2 and 04f264-2 and stays the same as current condition in 04f265-2. Table B-1 displays the amount of road closure needed to meet the EHE standard (PF-WILD-039).

Table B-1. Amount of Road Closure needed by Third Order drainage to meet EHE standard

3 rd Order Drainage	Drainage Name	Miles of Road Closure needed to meet Forest Plan EHE Standard*
04f259-1	Rye Cr. Poke Trib.	8.35
04f259-2	Rye Cr. Headwaters	4.13
04f262-1	N. Fk. Rye Headwaters	20.75
04f263-1	Cathouse Cr.	12.98
04f263-2	Fox Cr.	1.98
04f264-2	Middle Rye Cr.	9.08
04f265-2	Rye Cr. Bear Gulch	0.93

^{*}All numbers are approximate

Based on the Roads Analysis (PF-TRANS-001) that was done by the Darby Lumber Lands ID team, it was determined that in order to meet the goals and objectives of the Bitterroot Forest Plan within the Darby Lumber Lands Phase I Project area, the proposed plan amendment was necessary. Please see the Wildlife Section 3.5 of EA for a more detailed discussion on EHE.

Effects of Darby Lumber Lands EHE Amendment

Direct and Indirect Effects

Alternative B FPA would result in seven of the 13 third order drainages in the project area meeting the EHE standard. Implementation would improve the EHE in five of the third order drainages that do not currently meet the EHE standard. However, the improvement is not enough to comply with the current standard. It would also improve the EHE in two of the seven third order drainages that currently meet the standard by a small amount. It would improve EHE in five drainages that do not currently meet the standard but not enough to bring them into compliance with the standard. It would slightly reduce EHE in one drainage however that drainage would still meet the EHE standard. It would not change the existing EHE in three drainages, two of which currently meet the standard.

Six drainages would move towards meeting the Forest Plan standard and one will move into compliance. About 0.6 miles of permanent roads will be created or opened under Alternative B Final Proposed Action, but both of the drainages these new roads are located in would meet the EHE standard, and Forest Plan Goals and Objectives will still be met. An elk security analysis (Hillis et al. 1991) is included in our environmental analysis (EA Sec. 3.5.7) that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks.

Cumulative Effects

The EHE requirements and levels for the Three Saddle project are discussed in Wildlife Section in the EA. The understanding of the role EHE played in elk security has changed over the years and is now not thought to be the most important factor in providing effective elk habitat. Since the establishment of the Forest Plan in 1987, six other similar site-specific amendments of the EHE standard have been made:

Year	Number of 3 rd Order Drainages	Environmental Document	Ranger District
1997	2	Camp Reimel EA	Sula
2001	3	Burned Area Recovery EIS	Darby, Sula, West Fork
2002	5	Slate Hughes Watershed Restoration & Travel Management	West Fork
2008	5	Trapper-Bunkhouse EIS	Darby
2008	2	Haacke Claremont EA	Stevensville
2010	5	Lower West Fork EIS	West Fork
2011	5	Three Saddle	Stevensville

The cumulative effect of amending the EHE standard in the Darby Lumber Lands Phase I analysis area in addition to these previous EHE amendments would be imperceptible at the Forest scale. Many of the 3rd order drainages are within 10 percent of the EHE standard and the Bitterroot Valley elk population is stable. Elk security in Darby Lumber Lands project area is well below the recommended levels (Section 3.5.7A in the EA). This is due to open road and trail densities in some areas, combined with a lack of cover throughout most of the area. The lack of cover within the DLL project boundary is a result of previous regeneration harvest on both BNF and former Darby Lumber Company lands combined with high severity fire that occurred during 2000. The Bitterroot Forest Plan objective and goals would continue to be met.

None of the ongoing or reasonably foreseeable future projects on the Forest would further reduce EHE in any of the third order drainages within the DLL analysis area. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. In summary, the proposed actions, in combination with past and reasonably foreseeable future actions in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

Cumulatively, by implementing this site-specific standard for elk habitat effectiveness, the Darby Lumber Lands project area is expected to have appropriate levels of secure habitat for elk, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover and coarse woody debris modifications to the Forest Plan proposed in this project.

Application OF FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Elk Habitat Effectiveness Standard Amendment
Actions that do not significantly alter the multiple- use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (about 2.3 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not adjust management area boundaries.
3. Minor changes in standards and guidelines.	The elk habitat effectiveness amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The elk habitat effectiveness amendment allows access to forest areas that are needed for management requirements.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the elk habitat effectiveness amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.





the 1950s to the present have been certified and are adequately stocked. In this project, we are proposing stand regeneration harvest in group selection units. Stands that are designed for group selection would either regenerate naturally or be artificially regenerated by planting trees to appropriate stocking levels within 5 years (FEIS pg. 3.1-1).

- 3. The application of Inland Native Fish Strategy standards and guidelines, programmatic agreements with the U.S. Fish and Wildlife Service, BMPs, project design features, and mitigation measures in Alternative 4-modified will protect streams, stream banks, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment (FEIS pp. 3.7-8, 3.7-28, 3.7-29, 2-21 2-22, Appendix A).
- 4. In Alternative 4-modified, the harvesting systems were selected based on site-specific resource requirements and not primarily to generate the greatest dollar return or the greatest unit output of timber (FEIS pg. 3.1-2).

SITE-SPECIFIC BITTERROOT NATIONAL FOREST PLAN AMENDMENT

Implementation of Alternative 4-modified will require a site-specific amendment to the Bitterroot Forest Plan (1987) (FEIS p. 1-14 to 1-16 Appendix F). Therefore, my decision includes an amendment that will modify the following Forest Plan standards specifically as they relate to the Como Forest Health Project decision:

- · Visual Quality Standards for Unit 8
- Winter range thermal cover
- Coarse woody debris

Appendix F of the Como Forest Health FEIS contains detailed information about this amendment. The Visual Quality Objective amendment would apply only to Unit 8, 38 acres west of Three Frogs campground above Lake Como. Visual Quality Objectives have not been modified in any other project on the Bitterroot National Forest. Modifying the Visual Quality Objective for Unit 8 will not have a significant effect because of the small area (38 acres) and the relatively short duration of effect.

Section 1926.51 of the Forest Service Directives (www.fs.fed.us/emc/nfma/index5.html) gives guidance for determining what constitutes a "significant amendment" under NFMA. I have determined, based on this guidance, that this site-specific forest plan amendment is not significant. It is not significant because it will not significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, it will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period. The amendment modifies standards and guidelines in the Como Forest Health project area. Therefore, it is not a long-term change in the Forest Plan. The public has been notified of this amendment throughout the NEPA process.

APPENDIX F

FOREST PLAN AMENDMENTS

Implementation of the preferred Alternative requires site specific forest plan amendments to the Bitterroot Forest Plan (1987) (FEIS p. 1-12 to 1-14). Therefore, an amendment will be needed that will modify the following Forest Plan standards specifically as they relate to the Como Forest Health project.

- Coarse woody debris standard
- Winter range thermal cover standard
- Visual Quality Objectives

The need for these amendments to meet the purpose and need of the Como Forest Health project was disclosed in the Notice of Intent (June 17, 2013). This Appendix contains information that compliments the coarse woody debris analysis in the DEIS. The winter range thermal cover analysis is contained in the Wildlife analysis Section 3.3.12.3.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a "significant amendment" under NFMA. Based on this guidance, these site-specific forest plan amendments are not significant because they will not individually or cumulatively significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, they will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendments modify standards and guidelines, specific to the Como Forest Health project. Therefore, they are not a long term change in the plan. The Bitterroot Forest Plan is being revised. The public has been notified of these amendments throughout the NEPA process.

The amendment analyses are organized to:

- > Describe the amendment element
- > Explain the purpose and the need for the amendment
- > Describe the direct, indirect and cumulative impact of the amendment
- > Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant
- Display my conclusion on significance or no- significance

Coarse Woody Debris

Proposed Coarse Woody Debris Site-Specific Amendment

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to coarse woody debris and the Como project:

MA 1, 2, 3a: (USDA Forest Service 1987, III-6, f(4); III-12, f (3) and pp. III-19, f (4))

Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

The site-specific coarse woody debris standard to be applied for the Como project would read:

"To maintain soil productivity and wildlife habitat while meeting fuel reduction purpose and needs, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above 5-10 tons/acre in Fire Groups 2 and 4. Material will be evenly distributed on each

acre. At least minimum levels will be retained after prescribed fire treatments." (Fire Groups are described in the Como FEIS Chapter 3).

Purpose and Need of Woody Debris Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the coarse woody debris design of the Como project and support goals and objectives in Forest Plan and project proposal. For this project, the proposed, ecologically-based standard would replace the management area standard in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-19, f(4)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- Maintain soil productivity
- Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

> Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Como project area.

Effects of the Como Coarse Woody Debris Amendment

Direct and Indirect Effects

All harvest prescriptions for the Como project would leave a portion of the existing stand on the site. The harvested tree would be either whole-tree yarded to the landing or the tree would be processed in the forest and the logs would be carried to the landing on a forwarder. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. Five to 10 tons/acre in Fire Groups 2 and 4 will maintain future soil productivity (PF-SOIL-005).

The proposed fuel treatments would leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

Cumulative Effects

The CWD requirements for the Como project are discussed in the soils section of Chapter 3 in the Como FEIS. The CWD requirements are based on the most current science, which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.1 percent of the Bitterroot National Forest (based on maximum treatment area of 861 acres). Since the 1987 Forest Plan, forest plan amendments have been made to adjust CWD levels. Site-specific forest plan amendments were needed to ensure CWD retention in fuel reduction treatments were based on current science. Previous forest plan amendments in combination with Alternative 2 of this project cumulatively amount to 1.5 percent of the

Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Como project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover modification to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that are not significant can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Coarse Woody Debris Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies.
	The amendment affects a small area of the Bitterroot National Forest (about 0.1 percent). This site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or	The coarse woody debris amendment does not adjust
management prescriptions resulting from further on-site	management area boundaries. It provides for more site-
analysis when the adjustments do not cause significant	specific, ecologically-based management prescription
changes in the multiple-use goals and objectives for	applications by requiring a range of coarse woody debris
long-term land and resource management.	based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Thermal Cover

Site-Specific Amendment Proposed for this standard

The Bitterroot Forest Plan includes the following Forest-wide resource standard relevant to thermal cover and the Como Forest Health project:

1987 Forest Plan Record of Decision (USDA Forest Service 1987, p. 8)

"Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times."

The site-specific thermal cover standard to be applied for the Como Forest Health project would read:

- "Treatment areas in the Como Forest Health project area are exempt from the requirement to provide 25% thermal cover at all times in winter range.
- Thermal cover will be maintained in riparian habitat conservation areas (RHCAs) and outside of treatment areas where thinning and timber harvest would not occur."

Purpose and Need of Thermal Cover Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Como Forest Health project's thermal cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives. The proposed, ecologically-based standard would replace, for this project, the various management area standards in the 1987 Forest Plan ROD (USDA Forest Service 1987, p. 8).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)

> Provide habitat to support viable populations of native and desirable non-native wildlife and fish.

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)

- Maintain habitat to support viable populations of wildlife species.
- Cooperate with the State of and Montana to maintain the current level of big-game hunting opportunities.

Need for the Amendment

The proposed site-specific amendment recognizes and addresses the conflicts in the Forest Plan between forest-wide insect and disease standards (FP II-28) and the overlapping winter range thermal cover standard in the Forest Plan Record of Decision (1987, pg. 8). The Como Forest Health project area is largely ponderosa pine cover type (FEIS pg. 3-21). The fire return interval is typically five to 25 years, which creates open forests of ponderosa pine and Douglas-fir overstory with small openings of regeneration (FEIS pg. 3-7). The approximate basal area (BA) required to achieve 70% canopy closure in ponderosa pine stands is 190 ft2/acre (Neary 1985). Low elevation ponderosa pine forests are unlikely to sustain this density because of the high likelihood of mountain pine beetle infestation and potential crown fire (FEIS pg. 3-26). To retain large ponderosa pine on low elevation, drier sites, forest density needs to be reduced to less than 80ft2/acre, which would not provide 70% canopy closure.

The Forest Plan Record of Decision states, "Winter range will be managed to provide diversity of forage and hiding cover with at least 25% of the area in thermal cover at all times" (USDA 1987, pg. 8). Thermal cover is defined as coniferous trees 40 feet or taller with an average crown closure of 70 percent or more (Forest Plan pg. VI-41). Research conducted since the ROD for the Forest Plan was signed questions the value of thermal cover for survival of wintering elk (Cook et al. 1998). Researchers found "no significant, positive effect of

thermal cover on the condition of elk during six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Wintering elk survived and retained body weight better in open areas than in thermal cover. For this reason, forage availability appears to be more important for elk winter survival than thermal cover (3.3.12.3). Other studies suggest that elk use of dense cover is related more to protection and security needs, especially during hunting (Wisdom and Cook 2000), rather than thermoregulation.

Direct, Indirect, and Cumulative Impact of Como Forest Health Thermal Cover Amendment

Direct and Indirect Effects

There will be a decrease in the amount of available thermal cover; however it is not expected to impact the elk population in such a way that their viability would be compromised. All units in winter range in the Como Forest Health project area would be thinned to the forest density needed to protect the overstory from mountain pine beetle infestation and crown fire. Big-game thermal cover in ponderosa pine on winter range will be reduced by 10% in Alternative 2, 8% in Alternative 3, and 1% in Alternative 4 in the Como Forest Health project area.

Cumulative Effects

The thermal cover standards and levels for the Como Forest Health project are discussed in Wildlife Section in the EIS. The understanding of the role thermal cover plays in elk viability has changed over the years and is now not thought to be the most important factor in providing effective elk habitat. Since the establishment of the Forest Plan in 1987, five other similar site-specific amendments of the thermal cover standard have been made:

Year	Environmental Document	Ranger District
2001	Burned Area Recovery EIS	Darby, Sula, West Fork
2006	Middle East Fork Hazardous Fuels Reduction EIS	Sula
2008	Trapper-Bunkhouse EIS	Darby
2010	Lower West Fork EIS	West Fork
2011	Larry-Bass EA	Stevensville

There are no reasonably foreseeable actions in the analysis area that would further reduce thermal cover in the Como Forest Health analysis area.

Cumulatively, by implementing this site-specific standard for thermal cover, the Como Forest Health project area is expected to have appropriate levels of thermal cover on winter range, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific coarse woody debris and visual quality modifications to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that are not significant can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining quality habitat for elk by replacing the current Forest Plan Standard with one

Appendix F – Forest Plan Amendments

Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
	developed using more recent studies.
	The amendment affects a small area of the Bitterroot National Forest (about 1.5 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription by preventing massive canopy loss by thinning out overgrown forest stands.
3. Minor changes in standards and guidelines.	The thermal cover amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The thermal cover amendment applies more recent science to management prescriptions and provides an ecological basis for thinning in thermal cover.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the thermal cover amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Visual Quality Objective

Proposed Visual Quality Objective Site-Specific Amendment

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to visual quality objectives and the Como project:

Management Area (MA) 3c - Visual Quality Standards (page III-31):

▶ b1. The visual quality objective is retention (USDA, 1977)

The visual quality objective standard for Alternative 2 of the Como Forest Health Project would read:

➤ The visual quality objective in Management area 3c adjacent to NFSR 5621 and in the viewshed of Lake Como will be modification for the next 10 years with treatments in Units 8, 9, 15, 16, 45, 46, and 47 under Alternative 2.

The visual quality objective standard for Alternative 3 of the Como Forest Health Project would read:

The visual quality objective in Management area 3c in the viewshed of Lake Como will be modification for the next 10 years with treatment in Unit 47 under Alternative 3.

Purpose and Need of Visual Quality Objective Standard Amendment

Amendment Purpose

Commercial timber harvest and associated temporary roads, TLM trails, and landings in Units 8, 9, 15, 16, 45, 46, and 47 proposed in Alternative 2 would not meet the visual quality objective for retention and would be visible from Lake Como. The proposed treatments decrease long-term scenic integrity but without treatment, mountain pine beetle-caused mortality would increase. Mountain pine beetle-caused mortality would reduce scenic integrity but as a natural component of the ecosystem, the recovery of scenic integrity would be faster. The visual quality objective on these 185 acres visible from Lake Como and the Lake Como Recreation area would decrease two levels to Modification under the proposed treatments.

Commercial timber harvest in Unit 47 under Alternative 3 would reduce the scenic integrity from retention to modification in this five acre unit. Though units 8, 9, 15, and 45 would be treated under this alternative, Units 8 and 15 are non-commercial thin units that would block the visibility of commercial treatments in Units 9 and 45. No temporary roads would be built under Alternative 3 and the landing for Unit 47 would be screened by terrain or untreated units.

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987))

- Maintain a high level of visual quality on landscapes seen from population centers and major travel routes, and adjacent to fishing streams. (pp. II-2)
- Maintain the retention visual quality objective and manage timber. (III-30)

Pertinent Forest Plan Objectives

No plan objectives specific to visuals.

Need for the Amendment

This proposed site-specific standard amendment is intended to adjust the VQO for a small portion of the Bitterroot National Forest to allow treatment to occur in response to mountain pine beetle-caused mortality. Treatments are necessary to help make these forest stands resilient but will reduce the VQO from the current retention to modification.

Effects of the Como Visual Quality Objective Amendment

Direct and Indirect Effects

Alternative 2

Treatment units that would not meet the Forest Plan VQOs include: 8, 9, 15, 16, 45, 46, and 47. This amendment would have major (as defined on page 3.4-10 of the FEIS) long term effects in the immediate foreground of the Lake Como Recreation Area roads, trails and water area. Other units are screened by topography and vegetation and/or are viewed at greater distances in lower VQO areas. The effects in these screened units would be short-term and recover within five years of project implementation. The treatment effects in the screened units would be reduced contrasting elements (slash piles, stumps, landings, and temporary and permanent roads).

Alternative 3

Treatment Unit 47 and parts of Units 9 and 45 would not meet Forest Plan VQOs. Harvesting Unit 47 would cause this alternative to not meet the retention VQO and this unit would have moderate to major impacts on the Lake Como Viewshed. A reduction in the number of visible units from the Lake Como Recreation Area would correlate to a reduced impact compared to Alternative 2. However, Unit 47, and parts of Units 9 and 45 would not meet Forest Plan VQOs. Unit 43 is a commercial harvest in this alternative and this unit would have moderate impacts on the Lake Como viewshed, but would meet the VQO.

Cumulative Effects

For the project area, the long term effects of a healthier stand conditions have would have some beneficial impact to the collectively viewed landscape and the negative impacts associated with each alternative individually would not reach a threshold of lowering to overall landscape character (FEIS p3-263). There has never been a project specific plan amendment done to adjust the visual quality objectives for a vegetation management project, therefore there are no cumulative effects for this proposed amendment.

Application of FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that are not significant can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Visual Quality Standard Amendment
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The visual quality standard amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (less than 0.1 percent).
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The visual quality objective amendment does not adjust management area boundaries. It provides for an adjustment to the VQO for a small portion of the entire Bitterroot National Forest.
Minor changes in standards and guidelines.	The visual quality objective amendment is a minor change to management area standards because the areas affected are a small portion of the Bitterroot National Forest.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	There are no other opportunities for additional projects or activities that will contribute to achievement of the management prescription for the visual quality objectives.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the visual quality objective amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

National Forest. Please refer to the {Project File folder 'forest_plan_and_monitoring,' Project File document FPMON.pdf} for a listing of past monitoring reports.

Several sources of funding are available for monitoring; however, no assignment of funding sources will be made at this time, as the future availability of funds for monitoring is unknown. Project monitoring is dependent upon available funding, however the forest has been diligent in conducting monitoring in the past and it is expected that these efforts would continue {refer to Project File Folder 'forest plan and monitoring', PF-SOILS-002}.

Determination of Non-Significant Forest Plan Amendment

Implementation of **Alternative 1 (Modified)** will require a site-specific amendment to the Bitterroot Forest Plan (1987) (FEIS, p. 1-13). Therefore, my decision will modify language in the Forest Plan pertaining to the Forest-wide standard for Elk Habitat Effectiveness as described previously in this document on page 12. Appendix 1 discusses this amendment in further detail.

Section 1926.51 of the Forest Service Directives (www.fs.fed.us/emc/nfma/index5.html) gives guidance for determining what constitutes a "significant amendment" under NFMA. I have determined, based on this guidance, that this site-specific forest plan amendment is not significant because it will not significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, it will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the project area during the planning period. The public has been notified of the necessity for this amendment throughout the NEPA process for the Travel Management Planning Project. This amendment and discussion can be found in Appendix 1.

Implementation

Implementation of the Bitterroot Travel Planning Project is scheduled to begin immediately. As required by the 2005 Travel Management Rule, a motor vehicle use map (MVUM) and over-snow vehicle use map (OSVUM) will be published and available upon the signing of the ROD.

Further Information and Contact Person

For additional information concerning this decision contact Julie King, Forest Supervisor, Bitterroot National Forest, 1801 N. First, Hamilton, MT., (406) 363-7121. Information is also available at http://www.fs.usda.gov/bitterroot

Julie K. King

Forest Supervisor

Bitterroof National Forest

May 11, 2016

APPENDIX 1

FOREST PLAN AMENDMENT TO ELK HABITAT EFFECTIVENESS

Background Information

The Forest Plan guides all natural resource management activities and establishes management standards for the Bitterroot National Forest. It describes resource management practices, levels of resource production and management, and availability and suitability of lands for resource management.

The National Forest land within the Bitterroot National Forest has been divided into 23 management areas each with different management goals, standards and guidelines. These management areas are delineated and mapped which are to be used for reference.

There is one Forest plan standard that is being amended with the Bitterroot National Forest Travel Management Planning Project.

Analysis of the Elk Habitat Effectiveness Forest Plan Amendment

The Forest proposes to adopt a project-specific Forest Plan amendment for elk habitat effectiveness (EHE) through the Travel Management Planning Project Record of Decision. The proposed amendment language is located in Chapter 1 of this document. This amendment would only apply to the Travel Management Planning EIS. The existing EHE standard in the Forest Plan would apply to all future projects, unless amended through those project decisions.

The Forest Plan requires EHE, (which is inversely related to open road density), to be maintained at 50 percent for third-order drainages that were "roaded" and 60 percent that were "unroaded" at the time the Plan was signed (USDA Forest Service 1987a, II-21).

Since the Forest Plan standard for EHE was implemented (USDA Forest Service 1987a), many, but not all, of the third-order drainages on the Forest have been brought into compliance with the standard through road use restrictions. Approximately 3,300 miles of roads have been identified as part of the Forest's Transportation System at one time or another. These included roads on private lands within the Forest's boundary, planned roads that were never constructed, substandard roads that were never constructed to the standard of a specified road, and roads constructed for forest management. About 134 miles of National Forest System roads have been decommissioned, recontoured, and removed from the Forest's Transportation System. Additionally, about 195 miles have been hydrologically stabilized and placed into long-term storage. While the stored roads are no longer available for motorized public use, they remain on the Forest's Transportation System, and would be available in the future for administrative use by Forest Service personnel. About 448 miles of system roads are closed to all motorized use year-round. About 595 miles of system roads are closed to full-sized vehicles year-round, but allow access by OHVs and/or motorcycles on either a seasonal or year-round basis. About 887 miles of system roads remain open yearround to use by highway-legal motorized vehicles, and about 569 miles of system roads remain open seasonally to use by highway-legal motorized vehicles. More than half of the roads that were once part of the Forest's Transportation System are no longer open to full-sized vehicles {Project File document WILD-164.pdf. Open road densities are inversely correlated with EHE, so this reduction in open road densities indicates a substantial but unquantified increase in EHE across the Forest over time.

The reduction in open road densities that has occurred in many third-order drainages has undoubtedly played a part in the dramatic increase in elk numbers in the Bitterroot drainage. Elk spring trend counts increased from 3,537 elk in 1987, when the Forest Plan was signed, to a high of 8,169 elk in 2005. Elk trend counts declined each of the next three years, and were down to 5,950 elk in 2008, but increased to 7,373 by 2014 {Project File WILD-052.pdf}. These changes in elk numbers occurred during a period when EHE was slowly improving as projects were implemented, implying that the changes were probably related

to several factors including EHE. Despite these changes, the notable increase in elk numbers over the past 40 years, which is well distributed across the Forest (*Ibid*), appears to indicate that the elk population as a whole is able to tolerate the level of open road densities (and resulting EHE) that currently exist on the Bitterroot National Forest.

One hundred and eleven third-order drainages across the Forest are currently out of compliance with the Forest Plan EHE standard {Project File document WILD-053.pdf}. These drainages are listed in {Project File document WILD-055.pdf}, but are not identified individually here. An alternative that would have met the EHE standard in every third-order drainage across the Forest was considered but eliminated from detailed study (FEIS Chapter 2, Section 2.5). This alternative would have required closing approximately 504 miles of roads, which is about 33 percent of the 1,537 miles of roads currently open to full sized vehicles on the Forest. Many of these closures would have eliminated motorized access to important recreational facilities such as major road systems, popular trailheads, and several lookouts. The ID Team determined that this action would not be consistent with the Project's Purpose and Need to improve the quality of the recreational experience.

Alternatives 1 (Modified) will bring one of these third-order drainages into compliance with the Forest Plan EHE standard. One hundred ten third-order drainages would continue to not meet the EHE standard.

As stated above, elk populations have increased dramatically throughout the Bitterroot drainage since the Forest Plan was signed. Road use restrictions implemented on a project-level basis have improved EHE in some third-order drainages during this time, and many currently meet the EHE standard, while others do not. Despite not complying with specific Forest Plan standards for EHE in all third-order drainages, the Forest Plan objective of maintaining the current (1987) level of big-game hunting opportunities has been achieved and exceeded. The number of hunters, as well as the number of elk, has generally continued to increase, and the length of the general hunting season has remained at five weeks. The fact that the Forest continues to meet objectives for elk numbers appears to indicate that existing EHE levels are not a limiting factor for elk populations in the Bitterroot drainage.

Elk populations throughout the Bitterroot drainage have generally increased despite the fact that many third-order drainages across the Forest do not currently meet EHE standards. In most Bitterroot Hunting Districts, the 2004 Elk Management Plan objective is to stabilize or reduce the number of elk on winter ranges (Montana FWP 2004, amended). The small improvement in EHE resulting from additional road use restrictions in the action alternatives would have only minor effects on EHE from a Forest-wide perspective, and will not likely have a measurable effect on the elk population in the Bitterroot Valley. Therefore, this amendment will contribute toward meeting the Forest Plan hunting opportunity objective by cooperating with the State of Montana to maintain their hunting opportunity and elk population goals. Elk numbers are so high in the Bitterroot drainage and across the range of elk in Montana and the rest of western North America that elk viability seems assured for the foreseeable future.

Proposed Standard

The elk habitat effectiveness (EHE) standard that would only apply to the Travel Plan project would be:

"Existing elk habitat effectiveness will be maintained or improved within the Travel Management Planning project area."

Direct, Indirect, and Cumulative Impact

Elk Habitat Effectiveness Amendment

Direct and Indirect Effects

Under this amendment, none of the drainages would decrease in elk habitat effectiveness. All areas will either maintain the current EHE level or move towards meeting the Forest Plan standard. We will still be meeting related Forest Plan Goals and Objectives.

We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks.

Cumulative Effects

Since the adoption of the Forest Plan in 1987, seven site-specific amendments of the EHE requirement have been adopted. These are displayed below in Table 1.

Year	Number of 3 rd Order Drainages	Environmental Document	Ranger District
1997	2	Camp Reimel EA	Sula
2001	3	Burned Area Recovery EIS	Darby, Sula, West Fork
2002	5	Slate Hughes Watershed Restoration & Travel Management	West Fork
2008	5	Trapper-Bunkhouse EIS	Darby
2008	2	Haacke Claremont EA	Stevensville
2010	5	Lower West Fork EIS	West Fork
2011	5	Three Saddle EA	Stevensville
2015	6	Darby Lumber Lands EA	Darby

Table 1: Previous BNF Site-specific Forest Plan Amendments for EHE

Together with these previous EHE amendments, the cumulative effects of amending the EHE standard for the Travel Planning project will be imperceptible when considered at the Forest scale because the change in EHE requirements would not adversely affect the ability of the area to produce elk, and the Forest objective and goals for elk would continue to be met.

None of the present or reasonably foreseeable activities listed in Appendix A of FEIS would have a detrimental effect on EHE in any of the third-order drainages within the Project Area. Some may improve EHE in some third-order drainages. An elk security analysis (Hillis et al. 1991) was added to the environmental analysis protocol which has proven to be a better tool than EHE analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife & Parks. In summary, the proposed activities, in combination with past and reasonably foreseeable activities in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

Application of FSM 1926.51 "Not Significant" Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Elk Habitat Effectiveness Standard Amendment
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not alter the multiple-use goals and objectives for long-term land and resource management. This site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further onsite analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not adjust management area boundaries.
3. Minor changes in standards and guidelines.	The elk habitat effectiveness amendment is a minor change to forest plan standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The elk habitat effectiveness amendment will not apply to other projects within the project area.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the elk habitat effectiveness amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

This amendment would not alter the long-term relationship between levels of multiple-use goods and services originally projected in the Forest Plan for wildlife habitat, Allowable Sale Quantity, or other resource outputs, nor does it have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period.

Findings Required by Laws, Regulations, and Policies

National Environmental Policy Act

The direct, indirect and cumulative effects of applying this amendment were analyzed under the wildlife section in the FEIS.

Endangered Species Act

The FEIS (Chapter 3, Section 3.5) identifies threatened, endangered, candidate and proposed species in the project area and discuss effects of the proposed action and alternatives. This plan amendment complies fully with the laws and regulations that ensure protection of threatened, endangered, candidate and proposed species.

National Historic Preservation Act

This amendment does not authorize site-specific activities. Projects undertaken following the management direction will comply fully with the laws and regulations that ensure protection of cultural resources. This plan direction complies with the National Historic Preservation Act and other statues that pertain to the protection of cultural resources.

Clean Water Act

This amendment does not authorize site-specific activities. Projects undertaken following the management direction will comply fully with the laws and regulations that ensure protection of water quality. This plan direction complies with the Clean Water Act and other statutes that pertain to the protection of water quality.

Environmental Justice

Executive Order 12898 directs federal agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on low-income and minority populations. This plan direction has no effect on low income or minority populations.

10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The Westside project does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. Consistency with applicable laws, regulations, and the Bitterroot National Forest Plan were considered in the Westside Project EA (Ch. 1 pgs. 16-27).

Conclusion

After considering the environmental effects described in the Westside EA and specialist reports, I have determined that Alternative 2 will not have significant effects on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared.

Findings Required by Other Laws and Regulations

National Forest Management Act (NFMA)

Introduction

On April 9, 2012, the Department of Agriculture issued a final planning rule for National Forest system land management planning (2012 Rule) (77FR 68 [21162-21276]). None of the requirements of the 2012 Rule apply to projects and activities on the Bitterroot National Forest because the Bitterroot Forest Plan was developed under a prior planning rule (36 CFR §219.17(c)). As the 2012 Rule explains, "[The 2012 Rule] supersedes any prior planning regulation. No obligations remain from any prior planning regulation except those that are specifically included in a unit's existing plan. Existing plans will remain in effect until revised" (36 CFR §219.17).

Site-Specific Forest Plan Amendment

Implementation of Alternative 2 requires a site-specific forest plan amendment to elk habitat effectiveness, coarse woody debris, and visual quality standards in the 1987 Bitterroot National Forest Plan (EA Ch. 1 pg. 22, Ch. 3, Appendix B). Therefore, my decision includes an amendment to modify these three standards specific to the Westside project area (Appendix B).

Section 1926.51 of the Forest Service Directives (www.fs.fed.us/emc/nfma/index5.html) gives guidance for determining what constitutes a "significant amendment" under NFMA. I have used this guidance to determine that this site-specific forest plan amendment is not significant (Appendix B). This forest plan amendment will not significantly alter the long-term relationship between levels of multiple-use goods and services projected in the forest plan; and, it will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period. This amendment modifies standards and guidelines in the Westside project area at this time; it is not a long-term change. The public has been notified of this amendment throughout the NEPA process (PF-Scoping-001).

FOREST PLAN CONSISTENCY

Management activities are to be consistent with the Forest Plan (16 USC 1604 (i)). General management direction for the Bitterroot National Forest is found in the Forest Plan, which established Forest-wide and management area standards and guidelines (Forest Plan, Chapter II). This decision to manage the forest in the Westside project area is consistent with the goals and objectives of the Bitterroot National Forest Plan listed on pages II-2 through II-7. The project was designed to conform to Forest-wide standards while improving forest resilience to disturbances (Forest Plan pages II-18 through II-25, II-27 through II-29).

Coarse Woody Debris

Proposed Coarse Woody Debris Site-Specific Amendment

The Bitterroot Forest Plan (Forest Plan) includes the following Management Area (MA) standards relevant to coarse woody debris and the Westside Collaborative Vegetation Management project (Westside project):

MA 3a: (USDA Forest Service 1987, pp. III-19, f (4))

➤ Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

The site-specific coarse woody debris standard to be applied for the Westside project would read:

"To maintain soil productivity and wildlife habitat while meeting the fuel reduction purpose and need, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above 5-10 tons/acre in Fire Groups 2 and 4. Material will be evenly distributed on each acre. At least minimum levels will be retained after prescribed fire treatments." (Fire Groups are described in the Westside Collaborative Vegetation Management project EA, Chapter 3).

Purpose and Need of Woody Debris Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the coarse woody debris design of the Westside project and support goals and objectives in Forest Plan and project proposal. For this project, the proposed, ecologically-based standard would replace the management area standard in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-19, f(4)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- Maintain soil productivity
- Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Westside project area.

Effects of the Westside Coarse Woody Debris Amendment

Direct and Indirect Effects

All harvest prescriptions for the Westside project would leave a portion of the existing stand on the site. The harvested tree would be either whole-tree yarded to the landing or the tree would be processed in the forest and the logs would be carried to the landing on a forwarder. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. Five to 10 tons/acre in Fire Groups 2 and 4 will maintain future soil productivity (PF-SOIL-005).

The proposed fuel treatments would leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

Cumulative Effects

The CWD requirements for the Westside project are discussed in the soils section of Chapter 3 in the Westside EA. The CWD requirements are based on the most current science, which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.1 percent of the Bitterroot National Forest because very little of the project area is in fire groups 2 or 4. Since the 1987 Forest Plan, forest plan amendments have been made to adjust CWD levels. Site-specific forest plan amendments were needed to ensure CWD retention in fuel reduction treatments were based on current science. Previous forest plan amendments in combination with Alternative 2 of this project cumulatively amount to 1.5 percent of the Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Westside project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific elk habitat effectiveness and visual quality modifications to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

The determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	COARSE WOODY DEBRIS STANDARD AMENDMENT
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies. The amendment affects a small area of the Bitterroot National Forest (about 0.1 percent). This site-specific project amendment will have no effect on Forest Plan
	objectives or outputs.
2. Adjustments of management area boundaries or	The coarse woody debris amendment does not adjust
management prescriptions resulting from further on-site	management area boundaries. It provides for more site-
analysis when the adjustments do not cause significant	specific, ecologically-based management prescription

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	COARSE WOODY DEBRIS STANDARD AMENDMENT
changes in the multiple-use goals and objectives for long-term land and resource management.	applications by requiring a range of coarse woody debris based on habitat types.
Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve current Forest Plan goals and objectives.

Elk Habitat Effectiveness

Proposed Elk Habitat Effectiveness Forest Plan Amendment

The Bitterroot Forest Plan (Forest Plan) includes the following Forest-wide standard for elk habitat effectiveness (EHE) (USDA Forest Service 1987, pp. II-21, F.1.e.(14)):

Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

The site-specific EHE standard to be applied for the Westside project would read:

Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages, except in the Lower Lost Horse third order drainage. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built, except in Hayes Creek third order drainage. In Lower Lost Horse third order drainage, 44 percent or higher elk habitat effectiveness will be maintained and 59 percent or higher elk habitat effectiveness will be maintained in Hayes Creek third order drainage.

Purpose and Need for the EHE Amendment

This proposed site-specific Forest Plan amendment to the EHE standard would reduce the EHE standard by one percent in Hayes Creek and six percent in Lower Lost Horse third order drainages. The Hayes Creek third order drainage does not meet the Forest Plan EHE standard in "drainages where less than 25% of the roads have been built" because of the arterial road (NFSR 496) that traverses the drainage. All the local roads off the arterial road are closed and proposed for decommissioning and EHE is 59%, one percent below the 60% standard. To achieve the Forest Plan standard, a portion of NFSR 496 would need to be closed. Closing a portion of this road would prevent access to the Camas Creek trailhead and Lost Horse Observation Point. This Forest Plan amendment would maintain EHE at its current level.

The Lower Lost Horse third order drainage does not currently meet the Forest Plan EHE standard in "drainages where more than 25% of the roads have been built" because of several arterial roads that traverse the drainage, including NFSR 429, 496, 5620, 5621, and 62953. Alternative 2 would close several local roads off these arterial roads and improve EHE, but not enough to meet the EHE standard. To achieve the Forest Plan standard, a portion of one of the main arterial roads would need to be closed, which would prevent access to one of several important recreation destinations. This Forest Plan amendment would maintain EHE in this drainage at the improved level achieved by road closures contained in Alternative 2.

Effects of the Westside EHE Amendment

Direct and Indirect Effects

Under this amendment, none of the third order drainages in the Westside project area would decrease in elk habitat effectiveness. All areas will either maintain or improve the current EHE level or meet the Forest Plan standard. No new permanent roads will be created or opened as a result of this amendment, and related Forest Plan goals and objectives will still be met. The environmental analysis protocol includes elk security analysis (Hillis et al. 1991), which has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. The elk security analysis indicates that elk security may be reduced by 1.1% in the elk trend count unit. Elk numbers in the area are relatively stable, which may reflect limited hunter access in areas that may not technically qualify as security area. The rugged topography in much of the area limits hunter access. Elk may also escape hunting pressure by moving to private land where hunting is limited or prohibited.

Cumulative Effects

The EHE requirements and levels for the Westside project are discussed in Wildlife Section of the EA. Understanding of the role EHE plays in elk security has changed over the years and is not considered as important a factor in providing effective elk habitat. Since the establishment of the Forest Plan in 1987, seven other similar site-specific amendments of the EHE standard have been made:

YEAR	3RD ORDER DRAINAGES (#)	ENVIRONMENTAL DOCUMENT	RANGER DISTRICT
1997	2	Camp Reimel EA	Sula
2001	3	Burned Area Recovery EIS	Darby, Sula
2002	5	Slate Hughes Watershed Restoration & Travel Management	West Fork
2008	5	Trapper-Bunkhouse EIS	Darby
2008	2	Haacke Claremont EA	Stevensville
2010	5	Lower West Fork EIS	West Fork
2011	5	Three Saddle EA	Stevensville

The cumulative effect of amending the EHE standard in the Westside project area in addition to the previous EHE amendments would be imperceptible at the Forest scale. Many of the third order drainages are within 10 percent of the EHE standard and the Bitterroot Valley elk population is stable. The Bitterroot Forest Plan objective and goals would continue to be met.

None of the ongoing or reasonably foreseeable projects would further reduce EHE in any of the third order drainages in the analysis area. The proposed actions, in combination with past and reasonably foreseeable actions in the analysis area, would not cumulatively degrade the effectiveness of elk habitat and fully support Forest Plan goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific visual quality and coarse woody debris modifications to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

The determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	ELK HABITAT EFFECTIVENESS STANDARD AMENDMENT
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (about 1.6 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not adjust management area boundaries.
Minor changes in standards and guidelines.	The elk habitat effectiveness amendment is a minor change to management area standards; 1% below standard in Hayes Creek. Though EHE improves by 3% in Lower Lost Horse Creek drainage, it remains 6% below the standard. All other drainages in the project area exceed EHE standards
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	Three of the five third order drainages in the Westside project area greatly exceed Forest Plan Standards for elk habitat effectiveness and may compensate for Hayes Creek drainage being below standard by one percent.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the Elk Habitat Effectiveness amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve Forest Plan goals and objectives.

Visual Quality Objectives for Retention and Partial Retention

Proposed Visual Quality Objective Site-Specific Amendment

The Bitterroot Forest Plan (Forest Plan) includes the following Management Area (MA) standards for Visual Quality Objectives in the Westside project (Westside project):

MA 3a (USDA Forest Service 1987, pp. III-16, b (1)): The visual quality objective is partial retention (USDA 1977)

MA 3c (USDA Forest Service 1987, pp. III-31, b (1)): The visual quality objective is retention (USDA, 1977).

The site-specific visual quality objective standards to be applied to Alternative 2 in the Westside project would read:

"MA 3a: The visual quality objective is partial retention (USDA 1977) except for Units 3a, 3b, 3c, 4b, and 9b. The visual quality objective in these units is modification for the next 10 years.

MA 3c: The visual quality objective is retention (USDA, 1977) except for Unit 7c. The visual quality objective in Unit 7c is modification for the next 10 years.

Purpose and Need for Amendment to the Visual Quality Objective Standard

Amendment Purpose

This proposed site-specific standard amendment is intended to negotiate between competing forest plan direction. Standards for timber harvest in Management Areas 3a and 3c include:

The most efficient, visually and silviculturally acceptable logging systems will be utilized along with partial retention road density standards.

Openings created by timber harvest should be designed to blend with natural-sized openings. They will normally be 5 to 15 acres, but could be larger to blend with natural landscape patterns and to control insects and diseases (USDA Forest Service 1987, pp. III-18, e (6)).

MA 3c differs from MA 3a in that openings are generally smaller, less than seven acres. Though the standards for prescribing treatments meet Forest Plan standards and design features in the Westside project are planned to address visual quality concerns, they are apparently not adequate to meet the partial retention criteria in Units 3a, 3b, 3c, 4b, and 9b or retention criteria in Unit 7c. The forest remaining after treatment in these units may not be adequate to screen the proposed temporary roads, landings, and skyline corridors created during harvest. The VQO following treatment in these units is estimated to be modification.

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-4)

- Maintain a high level of visual quality on landscapes seen from population centers and major travel routes, and adjacent to fishing streams.
- Provide sawtimber and other wood products to help sustain a viable local economy.
- > Seek out opportunities for biologically appropriate and cost-efficient uneven-aged management.
- Provide an economically efficient sale program.

Need for the Amendment

The proposed treatment effects, as analyzed under worst case scenario, would create a long term decrease in scenic integrity to the viewshed for a period greater than one year. However, with no treatment, beetle infestation and fire risk could increase over larger portions of the landscape, thus increasing the risk of reduced scenic integrity for the foreseeable future. The visual quality objectives (VQOs) in Units 3a, 3b, 3c, 4b, 9b, and 7c of the Westside Project would be reduced from Partial Retention or Retention, respectively, to Modification for up to 10 years. There is potential that the effects would be less than the worst case scenario if design features are applied effectively.

Effects of the Westside Visual Quality Objective Amendment

Direct and Indirect Effects

Units 3a, 3b, 3c, 4b, and 9b would possibly reduce the VQO on 3% (126/3,870 acres) of Management Area 3a in the Westside project area. Unit 7c would possibly reduce the visual quality objective on 15% (92/608 acres) of Management Area 3c in the Westside project area. These units are visible from the Highway 93 corridor and individual homes and dispersed communities. They are not visible from population centers. Design features and silvicultural prescriptions that retain forest cover and develop uneven-aged forest conditions would provide some screening of the linear features created by the roads, landings, and skyline corridors though not enough to meet the VQOs of partial retention and retention, respectively, under a 'worst case scenario' analysis.

Cumulative Effects

There have been no other VQO changes in Management Area 3a on the Bitterroot National Forest. This VQO amendment in Management Area 3a would be a minor change for both the Westside project area and the Bitterroot National Forest (0.1% of the management area across the Forest).

Unit 8 in the Como Forest Health project is the only other unit in Management Area 3c in which the VQO was amended in the Bitterroot National Forest Plan. The combination of Unit 8 in the Como Forest Health project and Unit 7c in the Westside Collaborative Vegetation Management Project is 130 acres of the 7,027 (1.8% of Management Area 3c across the Forest). Modifying the Management Area 3c VQO for Unit 7c is a minor change both in the project area and the Management Area across the Forest. Cumulatively, by implementing this site-specific VQO standard, longer term effects created by potential insect outbreaks or wildfires similar to other areas along the Bitterroot face would be avoided. Application of the VQO amendment in the Westside project area would support the Forest competing goals of maintaining high levels of visual quality and controlling insects and disease, providing sawtimber, and developing uneven-aged forest conditions.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific elk habitat effectiveness and coarse woody debris modifications to the Forest Plan proposed in this project.

Application of FSM 1926.51 "Not Significant" Criteria

The determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that <u>are not significant</u> can result from four specific situations. This site-specific amendment is compared to those situations below:

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	VISUAL QUALITY OBJECTIVE STANDARD AMENDMENT
1. Actions that do not significantly alter the multiple use	The VQO amendment does not alter the multiple-use goals and objectives for long-term land and resource management.
Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The amendment affects a small area of the Bitterroot National Forest (about 0.1% MA 3a and 1.8% MA 3c, respectively). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs
2. Adjustments of management area boundaries or	
management prescriptions resulting from further on-site	The VQO amendment does not adjust management area
analysis when the adjustments do not cause significant	boundaries or change of multiple use goals and
changes in the multiple-use goals and objectives for	objectives for resource management.
long-term land and resource management.	
	The VQO amendment is a minor change to management
3. Minor changes in standards and guidelines.	area standards because the affected areas are a small
	portion of the Bitterroot National Forest.
4. Opportunities for additional projects or activities that	There are no other opportunities for additional projects
will contribute to achievement of the management prescription.	or activities that will contribute to achievement of the management prescription for visual quality objectives.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the VQO amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve current Forest Plan goals and objectives.

road system plan, any road constructed on land of the National Forest System in connection with a timber contract or other permit or lease shall be designed with the goal of reestablishing vegetative cover on the roadway and areas where the vegetative cover has been disturbed by the construction of the road, within ten years after the termination of the contract, permit, or lease either through artificial or natural means. Such action shall be taken unless it is later determined that the road is needed for use as a part of the National Forest Transportation System (16 USC 1608(b)).

All temporary roads constructed through this project will be rehabilitated within 10 years of contract termination.

6. Standards of roadway construction: Roads constructed on National Forest System lands shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources (16 USC 1608(c)).

Temporary roads will use existing road and trail templates to the extent feasible to limit the creation of new areas of soil disturbance.

SITE SPECIFIC FOREST PLAN AMENDMENT

According to the current 1987 Bitterroot Land and Resource Management Plan (Forest Plan), proposed management activities in the Meadow Vapor Project area are located within Management Areas (MAs) 1, 2, and 3A. The Meadow Vapor Decision Notice will suspend the following Forest Plan Management direction for the duration of this project, as described below, in order to implement the Proposed Action Alternative while still maintaining consistency with forest plan goals and desired conditions for all resources:

Forest-wide standard for Coarse Woody Debris (Forest Plan, pp. III-19, f (4)): Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

This project specific amendment is intended to apply the best available science to the coarse woody debris design of the Meadow Vapor project and support goals and objectives in Forest Plan and project proposal.

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Meadow Vapor project area.

Management Area 3a standard for Thermal Cover (Forest Plan ROD, p. 8): Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times.

This proposed site-specific standard amendment is intended to apply the best available science to the Meadow Vapor project's thermal cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives.

The purpose of the 1987 Forest Plan Record of Decision (USDA Forest Service 1987b) thermal cover requirement was to provide habitat that at that time was believed to be necessary to meet the Forest Plan goals and objectives of maintaining the State's population goals for elk. Recent research, however has questioned the necessity of thermal cover for survival of wintering elk (Cook et al. 1998). The researchers found "no significant, positive effect of thermal cover on the condition of elk during any of their six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. As discussed under cumulative effects, large amounts of winter range thermal cover do not seem necessary to support the State's elk population goals on the Bitterroot National Forest.

Forest-wide standard for Elk Habitat Effectiveness (Forest Plan pp. II-21, F.1.e.(14)): Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

This project specific amendment is intended to acknowledge that EHE standard cannot not be met in five third order drainages in the analysis area. The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

The environmental analysis protocol includes elk security analysis (Hillis et al. 1991), which has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. Elk numbers in the area are relatively stable, which may reflect limited hunter access in areas that may not technically qualify as security area. The rugged topography in much of the area limits hunter access. Elk may also escape hunting pressure by moving to private land where hunting is limited or prohibited.

Appendix E describes the project specific amendment in detail and how it meets the 2012 Planning Rule requirements.

COMPLIANCE WITH 36 CFR § 212.55(B)

36 CFR § 212.55 (b) provides direction to Federal agencies in response to Executive Order 11644, as amended by Executive Order 11989. The rule applies to decisions on motorized access designations. Sub-section (b) provides:

Specific criteria for designation of trails and areas. In addition to the criteria in paragraph (a) of this section, in designating National Forest System trails and areas on National Forest System lands, the responsible official shall consider effects on the following, with the objective of minimizing:

1) Damage to soil, watershed, vegetation, and other forest resources;

- 2) Harassment of wildlife and significant disruption of wildlife habitats;
- 3) Conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands; and
- 4) Conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands.

Where 36 CFR § 212.55 (b) Applies

This sub-section applies to the "designation of trails and areas" for motorized use. The Meadow Vapor project area includes non-motorized trails and roads that are restricted to OHV use only (R-4 designation, vehicles <50" in width) but does not currently have any designated motorized trails. The Proposed Action includes the construction of two new motorized trail segments (Table 1-2).

Trail #	Trail Name	Trail Mileage	Trail Class	Designed Use	Trail Restriction	Implementation Requirements
TBD	RD-DARD-09	0.7	3	OHV <50"	TR-2	Balanced Bench construction
TBD	73801	0.4	3	OHV <50"	TR-2	Balanced Bench construction
	TOTALS	1.1				

Table 1-1: Project Area Proposed New Motorized Trails (OHV<50")

Context for the Decision and Application of 36 CFR § 212.55 (b).

The project area includes Forest Plan Management Areas 1, 2, and 3a. Overall, there are approximately 80 miles of National Forest System Roads with varying levels of access, from fully closed to no restriction. In addition, there 17.3 miles of undetermined status roads that are closed to motorized travel; many are grown in and not drivable. Of the 17.3 miles of undetermined roads in the project area, the Proposed Action would decommission 14.9 miles and return them back to the productive land base. Approximately 2.5 miles of undetermined road would be added to the National Forest System of Roads under the Proposed Action. For further information on undetermined roads see the Transportation section 3.3. Roads analysis for this project has also identified 2.6 miles of system road to be decommissioned and 9 miles of road storage. The total amount of road decommissioning (17.5 miles) and road storage are proposed to reduce existing and future watershed effects. Routes seasonally closed to OHV (vehicles <50" in width) from October 15 to December 1, will be increased by 2.7 miles. Adding or removing motorized access to trails does not change the EHE attainment.

Cross-country travel was closed across the entire Bitterroot National Forest in 2001, eliminating adverse effects from that use in the project area, including the adjacent IRAs.

The ID Team reviewed the proposed trails in respect to the four criteria provided and the condition and characteristics of the project area. The IDT also reviewed Switalski and Jones (2012), a peer-reviewed paper on off-road vehicle BMPs, for additional direction in planning OHV routes. After considering the results of this review, the Proposed Action incorporates the following criteria to minimize adverse effects:

Criteria (b) 1:

• To *not* consider opening any "play" or "challenge" areas to minimize erosion and vegetation damage.

Appendix E – Project-Specific Forest Plan Amendment

Introduction

Under the National Forest Management Act and its implementing regulations at 36 CFR 219 (2012 Planning Rule), a plan may be amended at any time. Plan amendments may be broad or narrow, depending on the need for the change. I have the discretion to determine whether and how to amend the Bitterroot National Forest Plan (Forest Plan) and to determine the scope and scale of any amendment.

Amend Consistent with Forest Service NEPA Procedures (§ 219.13(b)(3))

The effects of the plan amendment are documented in the Meadow Vapor Project EA following Forest Service NEPA procedures at 36 CFR Part 220. Because this amendment applies to only this project, it is not considered a significant change to the plan for purposes of the NFMA (36 CFR 219.13(b)(3)).

Purpose of the amendment (36 CFR 219.13(b)(1)).

According to the current 1987 Bitterroot Land and Resource Management Plan (Forest Plan), proposed management activities in the Meadow Vapor Project area are located within Management Areas (MAs) 1, 2, and 3A. The Meadow Vapor Decision Notice will suspend the following Forest Plan Management direction for the duration of this project, as described below, in order to implement the Proposed Action Alternative while still maintaining consistency with forest plan goals and desired conditions for all resources:

Forest-wide standard for Coarse Woody Debris (Forest Plan, pp. III-19, f (4)): Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

Management Area 3a standard for Thermal Cover (Forest Plan ROD, p. 8): Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times.

Forest-wide standard for Elk Habitat Effectiveness (Forest Plan pp. II-21, F.1.e.(14)): Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

This project specific amendment is intended to apply the best available science to the coarse woody debris and thermal cover design of the Meadow Vapor project and support goals and objectives in Forest Plan and project proposal.

This project specific amendment is intended to acknowledge that EHE standard is not being met in five third order drainages in the analysis area. The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

Compliance with the Rule's Procedural provisions

As explained below, this amendment complies with the procedural provisions of the 2012 Planning Rule (36 CFR Part 219.13(b)).

Using the best scientific information to inform the planning process (§ 219.3):

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Meadow Vapor project area.

The purpose of the 1987 Forest Plan Record of Decision (USDA Forest Service 1987b) thermal cover requirement was to provide habitat that at that time was believed to be necessary to meet the Forest Plan goals and objectives of maintaining the State's population goals for elk. Recent research, however has questioned the necessity of thermal cover for survival of wintering elk (Cook et al. 1998). The researchers found "no significant, positive effect of thermal cover on the condition of elk during any of their six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. As discussed under cumulative effects, large amounts of winter range thermal cover do not seem necessary to support the State's elk population goals on the Bitterroot National Forest.

The environmental analysis protocol includes elk security analysis (Hillis et al. 1991), which has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. Elk numbers in the area are relatively stable, which may reflect limited hunter access in areas that may not technically qualify as security area. The rugged topography in much of the area limits hunter access. Elk may also escape hunting pressure by moving to private land where hunting is limited or prohibited.

Providing opportunities for public participation (§ 219.4) and providing public notice (§ 219.16; § 219.13(b)(2)):

As described in the Public Involvement section of this Decision Notice, opportunities for public comment on the forest plan amendment were provided during initial scoping (Project File SCOPE-001) and during the 30-day comment period on the Meadow Vapor EA (Project File PUBLIC-001). The forest plan amendment is described on page 1-15 and Appendix B of the EA.

No comments specific to the proposed amendment were received in either public comment period.

Format for plan components (§ 219.13 (b)(4); § 219.7 (e)):

Because the amendment is limited to where existing plan direction applies, the Forest Plan formatting will not be changed (§ 219.13 (b)(4)).

The plan amendment process (§ 219.13):

This plan amendment is consistent with Forest Service NEPA procedures. An environmental assessment was prepared and the forest plan amendment along with project activities will be authorized by this Decision Notice. There are no significant effects as described in the finding of no significant impact (see Section VIII in this Decision Notice).

Objection opportunity (36 CFR 219.50 through 219.62):

As stated in Section IX of this Decision Notice, this forest plan amendment was subject to the objection process pursuant to 36 CFR 219, subpart B.

Effective date (§ 219.17(a)(3):

As stated in Section IX of this Decision Notice, this forest plan amendment will be effective immediately after the decision is signed pursuant to 36 CFR 219.17(a)(3).

Documenting Compliance with the Rule's Applicable Substantive Provisions¹

The planning rule requires that those substantive rule provisions within 36 CFR 219.8 through 219.11 that are directly related to the amendment are applicable to this amendment. The applicable substantive provisions apply only within the scope and scale of the amendment (36 CFR 219.13(b)(5)).

As explained in the discussion that follows, both the purpose and the effects of the amendment are such that provisions in § 219.8(a)(2)(ii) Sustainability and § 219.10(a)(5) Multiple Use are directly related to the amendment. I have applied those provisions within the scope and scale of the amendment.

Scope and scale of the amendment

The scope and scale of the amendment are defined by the purpose for the amendment as described in the Purpose and Need section of this document. The scope of the project-specific amendment is limited to desired conditions, standards, and guidelines relative to management of habitat for elk and for management of coarse woody debris. Similarly, the scale of the project specific amendment is limited to the project area for Meadow Vapor Project. Accordingly, the amendment does not impact other resource areas or other areas of the Sula Ranger District.

¹ The applicable substantive provisions of the Rule are within 36 CFR 219.8 through 219.11. (81 FR 90723, December 15, 2016).

Rule provisions that are directly related to the amendment.

The rule requires that substantive rule provisions (§ 219.8 through 219.11) that are directly related to the amendment must be applied to the amendment. A determination that a rule provision is directly related to the amendment is based on any one or more of the following criteria:

- 1. The purpose of the amendment (§ 219.13(b)(5)(i));
- 2. Beneficial effects of the amendment (§ 219.13(b)(5)(i));
- 3. Substantial adverse effects associated with a rule requirement (§ 219.13(b)(5)(ii)(A)); "when an EA or CE is the NEPA documentation for the amendment, there is a rebuttable presumption that there is no substantial adverse effect, and thus no direct relationship between the rule and the amendment based on adverse effects (§ 219.13(b)(5)(ii)(B))."
- 4. Substantial lessening of protections for a specific resource or use (§ 219.13(b)(5)(ii)(A)).
- 5. Substantial impacts to a species or substantially lessening protections for a species (36 CFR 219.13(b)(6).

Applying these criteria, I have made the following determination:

Based on the NEPA analysis in the EA (Meadow Vapor EA, pp. 3.7-8 through 3.7-18) and as summarized here, I have determined that the amendment will not have substantially adverse effects on any resource or use and will not substantially lessen protections for species. Furthermore, the planning rule at 36 CFR 219.13(b)(5)(ii)(B) states that where I have made a Finding of No Significant Impact, there is a rebuttable presumption that the amendment will not have substantial adverse effects. No evidence has been presented to rebut that presumption.

Project and activity consistency with the plan

All future projects and activities must be consistent with the amended plan. The 2012 Planning Rule consistency provisions at 36 CFR 219.15(d) apply only to the plan component(s) added or modified under the 2012 Planning Rule. With respect to determinations of project consistency with other plan provisions, the Forest Service's prior interpretation of consistency (that the consistency requirement is applies only to plan standards and guidelines) applies. (FSH 1909.12, ch. 20, sec. 21.33.)

diameter classes, promoting fire-resilient stands, and reducing the number of stems, without any effort directed at regeneration.

Clearcuts will remove most of the overstory while retaining a few trees for future snag recruitment and wildlife. Clearcuts are proposed in units that need to be reset purely based on the health of the stand and desired species composition.

A seed tree regeneration method produces a two-aged stand in which some or all of the seed trees are retained as reserve trees for regeneration purposes. Reserve trees may also include those trees that are not expected for regeneration, but provide other purposes.

Project Specific Plan Amendment

Implementation of the Proposed Action will require a project-specific forest plan amendment to the 1987 Bitterroot Forest Plan to suspend certain Forest Plan standards relating to elk habitat effectiveness (EHE) and elk habitat objectives. Discussion concerning the plan amendment and its effects is found in Appendix C of the DLL II EA. The plan amendment is guided by the 2012 Planning Rule, which has different provisions from the 1982 Planning Rule procedures that the Forest Service used to develop the existing forest plan.

Consideration of Public Comments

I value public input and carefully considered the comments received on this project. My staff addressed the issues raised during the initial scoping period on the Proposed Action by refining the project design, identifying design criteria (EA, pp. 11-20), and conducting analysis to determine environmental effects (EA pp. 21-65 and project file documentation). Since that time, we received additional comments on the Darby Lumber Lands — Phase II Environmental Assessment (October 2018). Responses to public comments on the EA are contained in Appendix C of this Decision Notice.

Public Involvement

The project was listed in the Schedule of Proposed Actions in July 2016. On September 17, 2017, a scoping letter soliciting comments on the proposed action was mailed to adjacent landowners, organizations, other agencies, and individuals who had previously requested notification about the types of activities included in the project. The scoping letter and associated map were posted on the Bitterroot National Forest website. At the completion of the scoping period forty letters had been received.

Using the comments from the public and other agencies, the interdisciplinary team identified issues regarding the effects of the proposed action (EA pp. 6-7).

Letters were mailed to individuals and organizations that had previously commented on or expressed interest in the project on October 19, 2018. The Darby Lumber Lands – Phase II EA was made available to the public on the Bitterroot National Forest website. Hard copies were also available the Supervisor's Office. The 30-day comment period on the EA began with the publication of legal notice in the Ravalli Republic newspaper on October 21, 2018. At the close of the comment period, 13 comment letters had been received. The Agency's response to comments is contained in Appendix C of this Decision Notice.

Introduction

Under the National Forest Management Act and its implementing regulations at 36 CFR 219 (2012 Planning Rule), a plan may be amended at any time. Plan amendments may be broad or narrow, depending on the need for the change. I have the discretion to determine whether and how to amend the Bitterroot National Forest Plan (Forest Plan) and to determine the scope and scale of any amendment.

Amend Consistent with Forest Service NEPA Procedures (§ 219.13(b)(3))

The effects of the plan amendment are documented in the Darby Lumber Lands – Phase II Project EA following Forest Service NEPA procedures at 36 CFR Part 220. Because this amendment applies to only this project, it is not considered a significant change to the plan for purposes of the NFMA (36 CFR 219.13(b)(3)).

Purpose of the amendment (36 CFR 219.13(b)(1)).

According to the current 1987 Bitterroot Land and Resource Management Plan (Forest Plan), proposed management activities in the Darby Lumber Lands – Phase II Project area are located within Management Areas (MAs) 1, 2, 3a and 8b. The Darby Lumber Lands - Phase II Decision Notice will suspend the following Forest Plan Management direction for the duration of this project, as described below, in order to implement the Proposed Action Alternative while still maintaining consistency with forest plan goals and desired conditions for all resources:

Forest-wide standard for Elk Habitat Objectives (Hiding Cover) (Forest Plan pp. II-21, F.1.e.(12)): Big-game cover/forage relationships, as described in Guides for Elk Habitat Objectives (USDA, 1978), will be a consideration in planning timber management activities.

Purpose: This proposed site-specific suspension of this standard is intended to update the project's thermal and hiding cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives.

Forest-wide standard for Elk Habitat Effectiveness (Forest Plan pp. II-21, F.1.e.(14)): Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

Purpose: This project specific variance from this standard is intended to allow three third order drainages in the analysis area to not meet EHE standards. The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

Management Area 2 standard for Guides for Elk Habitat Objectives (Forest Plan pp. III-10-11, e.(1)(e)): Timber harvest on land unsuitable for timber production is appropriate for meeting cover/forage objectives if other resource objectives including soil and water can be met.

Purpose: This proposed site-specific suspension of this standard is intended to update the project's thermal and hiding cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives.

Compliance with the Rule's Procedural provisions

As explained below, this amendment complies with the procedural provisions of the 2012 Planning Rule (36 CFR Part 219.13(b)).

Using the best scientific information to inform the planning process (§ 219.3):

The purpose of the 1987 Forest Plan Record of Decision (USDA Forest Service 1987b) thermal cover requirement was to provide habitat that at that time was believed to be necessary to meet the Forest Plan goals and objectives of maintaining the State's population goals for elk. Recent research, however has questioned the necessity of thermal cover for survival of wintering elk (Cook et al. 1998). The researchers found "no significant, positive effect of thermal cover on the condition of elk during any of their six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. As discussed under cumulative effects, large amounts of winter range thermal cover do not seem necessary to support the State's elk population goals on the Bitterroot National Forest.

The environmental analysis protocol includes elk security analysis (Hillis et al. 1991), which has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. Elk numbers in the area are relatively stable, which may reflect limited hunter access in areas that may not technically qualify as security area. The rugged topography in much of the area limits hunter access. Elk may also escape hunting pressure by moving to private land where hunting is limited or prohibited.

Providing opportunities for public participation (§ 219.4) and providing public notice (§ 219.16; § 219.13(b)(2)):

As described in the Public Involvement section of this Decision Notice, opportunities for public comment on the forest plan amendment were provided during initial scoping (SCOPE-042) and during the 30-day comment period on the Darby Lumber Lands - Phase II EA (PUBLIC-003). The forest plan amendment is described in Appendix C of the EA.

Comments specific to the proposed amendment were received were considered by the responsible official (Appendix C of the Decision Notice).

Format for plan components (§ 219.13 (b)(4); § 219.7 (e)):

Because the amendment is limited to where existing plan direction applies, the Forest Plan formatting will not be changed (§ 219.13 (b)(4)).

The plan amendment process (§ 219.13):

This plan amendment is consistent with Forest Service NEPA procedures. An environmental assessment was prepared and the forest plan amendment along with project activities will be authorized by this Decision Notice. There are no significant effects as described in Darby Lumber Lands – Phase II Project EA and the Finding of No Significant Impact (FONSI).

Effective date (§ 219.17(a)(3):

This forest plan amendment will be effective immediately after the decision is signed pursuant to 36 CFR 219.17(a)(3).

Documenting Compliance with the Rule's Applicable Substantive Provisions¹

The planning rule requires that those substantive rule provisions within 36 CFR 219.8 through 219.11 that are directly related to the amendment are applicable to this amendment. The applicable substantive provisions apply only within the scope and scale of the amendment (36 CFR 219.13(b)(5)).

As explained in the discussion that follows, both the purpose and the effects of the amendment are such that provisions in § 219.8(a)(2)(ii) Sustainability and § 219.10(a)(5) Multiple Use are directly related to the amendment. I have applied those provisions within the scope and scale of the amendment.

Scope and scale of the amendment

The scope and scale of the amendment are defined by the purpose for the amendment as described in the Purpose and Need section of this document. The scope of the project-specific amendment is limited to desired conditions, standards, and guidelines relative to management of habitat for elk. Similarly, the scale of the project specific amendment is limited to the project area for Darby Lumber Lands – Phase II Project. Accordingly, the amendment does not impact other resource areas or other areas of the Darby/Sula Ranger District.

Rule provisions that are directly related to the amendment.

The rule requires that substantive rule provisions (§ 219.8 through 219.11) that are directly related to the amendment must be applied to the amendment. A determination that a rule provision is directly related to the amendment is based on any one or more of the following criteria:

- 1. The purpose of the amendment (§ 219.13(b)(5)(i));
- 2. Beneficial effects of the amendment (§ 219.13(b)(5)(i));

¹ The applicable substantive provisions of the Rule are within 36 CFR 219.8 through 219.11. (81 FR 90723, December 15, 2016).

- 3. Substantial adverse effects associated with a rule requirement (§ 219.13(b)(5)(ii)(A)); "when an EA or CE is the NEPA documentation for the amendment, there is a rebuttable presumption that there is no substantial adverse effect, and thus no direct relationship between the rule and the amendment based on adverse effects (§ 219.13(b)(5)(ii)(B))."
- 4. Substantial lessening of protections for a specific resource or use (§ 219.13(b)(5)(ii)(A)).
- 5. Substantial impacts to a species or substantially lessening protections for a species (36 CFR 219.13(b)(6).

Applying these criteria, I have made the following determination:

Based on the NEPA analysis in the EA (Darby Lumber Lands – Phase II Project EA, pp. 53-56) and as summarized here, I have determined that the amendment will not have substantially adverse effects on any resource or use and will not substantially lessen protections for species (EA p. 55). Furthermore, the planning rule at 36 CFR 219.13(b)(5)(ii)(B) states that where I have made a Finding of No Significant Impact, there is a rebuttable presumption that the amendment will not have substantial adverse effects. No evidence has been presented to rebut that presumption.

Project and activity consistency with the plan

All future projects and activities must be consistent with the amended plan. The 2012 Planning Rule consistency provisions at 36 CFR 219.15(d) apply only to the plan component(s) added or modified under the 2012 Planning Rule. With respect to determinations of project consistency with other plan provisions, the Forest Service's prior interpretation of consistency (that the consistency requirement is applies only to plan standards and guidelines) applies. (FSH 1909.12, ch. 20, sec. 21.33.)

Forest Plan Amendment Discussion

During scoping for the Gold Butterfly project, the public was notified there were four Forest Plan standards the project may not be in compliance with. During the analysis for the DEIS, it was determined there were only two standards that would require a project-specific variance. They are listed below.

Forest-wide standard for Elk Habitat Effectiveness (Forest Plan pp. II-21, F.1.e.(14)): Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in c roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

Purpose: This project specific variance from this standard is intended to allow six third order drainages in the analysis area to not meet EHE standards. The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

Management Area 3a standard for Thermal Cover (Forest Plan ROD, p. 8): Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times.

Purpose: This proposed site-specific variance from this standard is intended to apply the best available science to the Gold Butterfly project's thermal cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives.

During scoping, the Forest is required to identify which components of the 2012 Planning Rule apply to a project amendment. Scoping notifications acknowledged that a project-specific variance of the winter range thermal cover and elk habitat effectiveness standards are likely related to the Forest Planning consideration of habitat conditions for wildlife commonly used and enjoyed by the public at § CFR 219.10(a)(5).

Planning Regulation	Part	Subpart	Does the plan amendment meet this planning rule requirement?		
Section			Elk Habitat Effectiveness	Thermal Cover	
219.10 Multiple Use	(a) Integrated resource management	(5) Habitat conditions, subject to the requirements of § 219.9, for wildlife, fish, and plants commonly	The Forest Plan standard for elk habitat effectiveness (EHE) is to manage roads through the Travel Plan process to attain or maintain 50 percent or higher EHE in currently roaded	Thermal cover was analyzed separately within the identified winter range across HD 261 that includes the Gold Butterfly project area. Winter range in the project area is generally limited to	

Planning Regulation	Part	Subpart	Does the plan amendment meet this planning rule requirement?		
Section			Elk Habitat Effectiveness	Thermal Cover	
	for multiple use	enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence, and other activities (in collaboration with federally recognized Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments).	drainages, and 60 percent or higher EHE in drainages where less than 25% of the roads had been built. EHEs of 50% and 60% equate to 2 miles and 1 mile of open road per square mile, respectively (Lyon 1983). This standard supports the Forest Plan objectives of maintaining habitat to support viable populations of wildlife species, and cooperating with the state of Montana to maintain the current level of big game hunting opportunities. The EHE model described by Lyon does not explicitly factor in noise to help determine the effects of motorized vehicles to the ability of elk to utilize habitat near roads. However, noise from vehicles likely affects the distance from roads or trails at which elk are disturbed, and would thus be one of the implicit factors that influenced the amount of elk use at various distances from open roads documented by Lyon (1983). The EHE model described by Lyon was the best information available at the time the Plan was implemented. Subsequently, a model developed by Hillis et al. (1991) has been used in Bitterroot National Forest project planning to maintain elk security during hunting season when elk are most vulnerable. The project would reduce the existing elk security area percentage in HD 261 to a minor degree. Several units in areas currently classified	lower elevations along the western edge of the project area, as well as the lower elevation south aspects along the larger streams. Most of the project area is too high to be classified as winter range (PF-WILD-076). Approximately 64,709 acres of BNF and adjacent private lands in a larger herd unit area defined by HD 261 are classified as elk winter range (Ibid). VMap estimates that about 10,304 acres (16%) of this winter range area qualify as thermal cover (PF-WILD-030). This amount of thermal cover does not meet either the 20% optimal thermal cover percentage referenced in Guides for Elk Habitat Objectives (USDA Forest Service 1978), nor the 25% minimum standard for thermal cover in winter range set in the Bitterroot Forest Plan Record of Decision. The purpose of the Forest Plan thermal cover requirement was to provide habitat that, at that time, was believed to be necessary to meet the Forest Plan goals and objectives of maintaining the State's population goals for elk. Recent research, however has questioned the necessity of thermal cover for survival of wintering elk (Cook et al. 1998). The researchers found "no significant, positive effect of thermal cover on the condition of elk during any of their six experiments. In contrast, dense cover provided a costly energetic environment, resulting in	

Planning Regulation Section	Part	Subpart	Does the plan amendment meet this planning rule requirement?		
300000			Elk Habitat Effectiveness	Thermal Cover	
			as security cover would no longer qualify as security cover due to loss of hiding cover (PF-WILD-030; PF-WILD-083). New specified and temporary roads would not reduce security area because they would be closed to public motorized use. The fact that elk numbers in the area are stable or increasing may be a reflection of the rugged topography in much of the area, which limits hunter access to elk in areas that may not technically qualify as security area. Elk may also escape hunting pressure by moving to private land refuges where hunting is limited or prohibited. The project could result in a minor increase in the number of elk using private land.	significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Whether thermal cover is necessary for individual elk survival or elk population viability seems open to question. As discussed in Chapter 3 of the DEIS, large amounts of winter range thermal cover do not seem necessary to support the State's elk population goals on the Bitterroot National Forest.	
			It is likely that there would be little discernable change in elk numbers as a result of implementing the project. However, the combination of reduced cover and increased human access in some parts of the project area could displace more elk onto adjacent private land during some parts of the year. Changes to elk populations resulting from implementation of the project would be difficult to quantify because elk populations are also affected by hunting regulations, predation levels and weather, among other factors. The 2017 elk trend count indicated that elk populations across Hunting District (HD) 261, which includes the project area, are towards the high end of the range of desired elk population objectives identified in the 2004 Montana Elk Management Plan (MDFWP 2004, amended).		

Discussion

Intent of Forest Plan Standards

The Forest Plan standard for elk habitat effectiveness (EHE) cites Lyon et al. (1983) as a standard for road density that should be used to evaluate elk habitat effectiveness. The intent of the standard was to provide better security for animals.

The purpose of the thermal cover requirement was to provide habitat that, at the time, was believed to be necessary to support viable populations of wildlife species and to maintain the current level of big game hunting opportunities (USDA Forest Service 1987, p. II-5).

Elk Habitat Effectiveness

The Forest Plan says Lyon et al. (1983) should be applied to third order drainages. There are 385 third order drainages on the forest which range between 3 – 9,625 acres in size. Only 75 drainages (19%) are >3,000 acres. Lyon et al. 1983 says his standards should be applied to an area >3,000 acres. The standard does not state what roads are to be considered: all roads, all publicly open roads, only roads open during hunting season. Most recently, the Bitterroot National Forest has been using all roads open at any point during the year, maximizing the number of drainages that do not meet the standard. The elk population in the Bitterroot has increased dramatically since the Forest Plan has been written despite non-compliance with this standard in 110 drainages (out of 386 drainages across the forest). Elk habitat "effectiveness" is more related to forage abundance and quality than road density (Millspaugh et al. 2015, Ranglack et al. 2016, Crane et al. 2016). Pages 90 - 104 in PF-WILD-001 discuss existing conditions and effects of proposed actions to elk habitat effectiveness as assessed by existing Forest Plan Standards.

Elk Thermal Cover

Thermal cover is difficult to accurately measure on the landscape. Procedures outlined in Guides for Elk Habitat Objectives (USDA Forest Service, 1978) are no longer used and standards are expressed in crown closure not canopy cover. This nuance is important in that each is measured in a different way. As defined by Paletto and Tosi (2009):

"The canopy cover can be defined as the per cent forest area occupied by the vertical projection of tree crowns (Avery and Burkart 1994; Korhonen et al. 2006), which can be assumed as the true value of the overstorey cover according to Bonnor (1967). The canopy closure has an analogous meaning but it is represented by the proportion of sky hemisphere obscured by vegetation when viewed from a single point (Jennings et al. 1999) and, with the maximum expansion's degree of its angle of view, it is a projection of a hemisphere onto a plane (Daubenmire 1959)".

Closure when measured from the ground using a wide angle view (spherical densiometer) or from antiquated aerial hemispherical digital photographs overestimate canopy cover (Paletto and Tosi 2009). Furthermore there is significant variability of results from different techniques to measure canopy closure (Paletto and Tosi 2009). Whereas different techniques to measure canopy cover are more correlated and produce more similar results (Mirik and Absley 2012, Hulet at al. 2013, Richardson and Moskal 2014). Techniques used to measure canopy closure overestimate canopy cover on average by 10.15% (Paletto and Tosi 2009). Therefore, values ≥60% canopy cover likely fulfill the Forest Plan standard of ≥70%

crown closure. VMap is the most appropriate tool for assessing canopy cover and other vegetation variables because it captures a moment in time for comparison across the entire forest, uniformly measured, and is sufficiently accurate. VMap accuracy is >90% (Brown 2016). Landscape scale remote sensing mapping is considered suitable for management planning when overall accuracy is >85% (Anderson et al. 1976, Hulet et al. 2013). Pages 90 - 104 in PF-WILD-001 discuss existing conditions and effects of proposed actions to elk thermal cover as assessed by existing Forest Plan Standards.

Cumulative Impact of Elk Habitat Effectiveness and Habitat Objectives Amendment

There have been 10 project-specific amendments (one more anticipated with reasonably foreseeable projects (Darby Lumber Lands II)) related to EHE since the Forest Plan was approved in 1987. There have been 7 project-specific amendments related to thermal and hiding cover. As discussed above, the Forest Plan objective of maintaining the current (1987) level of big-game hunting opportunities has been achieved. The number of hunters, as well as the number of elk, continues to increase, and the general hunting season has remained at five weeks. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than EHE analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with the Montana Department of Fish, Wildlife and Parks. In summary, the proposed activities, in combination with past and reasonably foreseeable future actions in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

Appendix D: Forest Plan Amendment Discussion

The Mud Creek Project will require project-specific amendments to the Bitterroot Forest Plan. Project-specific amendments arise from a need to take a specific action to meet a forest plan goal or desired condition in such a way that it would be inconsistent with plan standards. These, project, site-specific amendments would align elk habitat, old growth, and coarse woody debris objectives on the forest with the best available scientific information The plan is amended contemporaneously with the approval of the project or activity so that the project or activity is consistent with the plan as amended and the amendment only applies to that project or activity (§ 219.15(c)). For additional information regarding these site-specific amendments, please also see the final decision notice and finding of no significant impact (DN/FONSI).

When a plan amendment is made together with, and only applies to, a project or activity decision, the analysis prepared for the project or activity may serve as the documentation of the preliminary identification of the need to change the plan (§ 219.13(b)(1)) and the amendment would be subject to pre-decisional administrative review under § 218 Subpart A.

The Forest is required to identify which substantive requirements of the 2012 Planning Rule are likely to be directly related to the amendment. Scoping notifications acknowledged that an amendment related to the winter range thermal cover and elk habitat effectiveness standards is needed. After scoping, it was determined a project-specific amendment is also needed for old growth and coarse-woody debris standards in the plan. This document served as the initial notice during the draft EA comment period, regarding which substantive requirements are likely directly related to the old growth and coarse woody debris amendments.

The Mud Creek project is being proposed, in part, to address vegetative changes in the project area due to departures from historic disturbance regimes. There is also a need to improve habitat and forage quality and quantity for bighorn sheep, mule deer, elk, and other regionally sensitive species. Vegetation management activities and transportation system changes are being proposed to help meet those project purposes. The provision of the 2012 Planning Rule that applies to EHE and thermal cover is § CFR 219.10(a)(5) consideration of habitat conditions for wildlife commonly used and enjoyed by the public. The purpose of the amendment related to EHE is to maintain or restore sufficient access for management of the Forest and public use. The purpose of the thermal cover amendment is to allow vegetation management activities to occur that will move the project area towards desired conditions, restoring habitat. Amending the plan to set aside plan standards related to EHE and thermal cover will allow proposed activities to occur that will improve habitat conditions for elk and other big game species found in the project area.

One of the purposes of the Mud Creek project is to improve landscape resilience to disturbances (such as insects, diseases, and fire) by modifying forest structure and composition, and fuels. The current Forest Plan definition is general and does not account for differing old growth attributes by forest type. The current standard puts a constraint on actions that help us achieve or maintain desired conditions. The purpose of the old growth amendment is to update the Forest Plan definition of old growth to align with old growth classifications identified for Western Montana in "Old Growth Forest Types of the Northern Region", commonly referred to as *Green et al.* This paper better defines and classifies old growth based on location and habitat type. Amending to update the definition of old growth will help ensure the project maintains old growth based on habitat types found on the Forest. For the old growth standard, the provision that applies is §

219.9(a)(2)(i), which requires plan components to maintain or restore the diversity of ecosystems and habitat types throughout the plan area including "key characteristics associated with terrestrial and aquatic ecosystem types". This provision was identified due to old growth being a key characteristic associated with vegetation on the Forest and the project's purpose of improving landscape resilience to disturbance.

Part of the purpose of the Mud Creek project is to reduce crown fire hazard potential within the wildland-urban interface (WUI), adjacent community protection zone, and low severity fire regimes. The purpose of the coarse woody debris amendment is to ensure the amount of coarse woody debris to be left on the ground aligns with the historical ranges identified for the Fire Groups present within the project area. For the coarse-woody debris standard, the provision that applies is § 219.8 (a)(1)(iv) and (v), which requires plan components to maintain or restore ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account: (iv) System drivers, including wildland fire and (v) Wildland fire and opportunities to restore fire adapted ecosystems. These provisions were identified due to the departure from historic fire regimes within the project area. Modifying the amount of coarse woody debris that is necessary to be left on site will provide a better opportunity to restore fire adapted ecosystems.

Elk Habitat Objectives

During scoping for the Mud Creek project, the public was notified of the Forest's intent to undertake a programmatic amendment for elk habitat objectives in the 1987 Forest Plan. The programmatic Forest Plan amendment was dropped from this project, resulting in the need to conduct a project-specific amendment for elk habitat effectiveness and thermal cover standards. For this project, the plan standards regarding Elk Habitat Effectiveness and Thermal Cover will be set aside. Amending the plan to set aside plan standards related to EHE and thermal cover will allow proposed activities to occur that will improve habitat conditions for elk and other big game species found in the project area. The purpose of the amendment related to EHE is to ensure there is sufficient access for management of the Forest and public use. The purpose of the thermal cover amendment is to allow vegetation management activities to occur that will move the project area toward desired conditions.

Forest-wide standard for Elk Habitat Effectiveness (Forest Plan pp. II-21, F.1.e.(14)): Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

Purpose: To ensure there is adequate access in the project area, a project-specific variance from this standard is intended to allow fourteen third order drainages in the analysis area to not meet EHE standards. The small size of the 3rd order watersheds in this project area limits the amount of roads that can be present on the ground. To meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation.

Forest plan record of decision direction for thermal cover (Forest Plan ROD, p. 8): Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times.

Purpose: This proposed site-specific variance from this standard is intended to apply the best available scientific information to the Mud Creek project's thermal cover design and adapt to changes that have occurred on the landscape, which support Forest Plan and project goals and objectives. The elk analysis area in the Mud Creek project area has experienced a variety of disturbance since the finalization of the forest plan, including vegetation management, prescribed fire, and several wildfires, each of which has altered the spatial arrangement of cover types. The proposed amendment would allow for treatment that supports continued enhancement of the diversity of ecological conditions utilized by elk, as described by the current best available scientific information (Cook et al. 1998, Skovlin et al. 2002, Thompson et al. 2005)).

Elk Habitat Effectiveness

The Forest Plan standard for elk habitat effectiveness (EHE) is to manage roads through the Travel Plan process to attain or maintain 50 percent or higher EHE in currently roaded drainages, and 60 percent or higher EHE in drainages where less than 25% of the roads had been built. EHEs of 50% and 60% equate to 2 miles and 1 mile of open road per square mile, respectively (Lyon 1983). This standard supports the Forest Plan objectives of maintaining habitat to support viable populations of wildlife species, and cooperating with the state of Montana to maintain the current level of big game hunting opportunities. The EHE model described by Lyon does not explicitly factor in noise to help determine the effects of motorized vehicles to the ability of elk to utilize habitat near roads. However, noise from vehicles likely affects the distance from roads or trails at which elk are disturbed, and would thus be one of the implicit factors that influenced the amount of elk use at various distances from open roads documented by Lyon (1983).

EHE compliance was calculated in the Bitterroot Travel Management Plan EIS (U.S. Department of Agriculture 2016). An EHE analysis on the 28 3rd order drainages that intersect the project area shows 14 of the 3rd order drainages do not meet the standard (PF-WILD-001).

The EHE model described by Lyon was the best information available at the time the Plan was implemented. In the early 1990s, after an era of heavy regeneration harvesting and many open roads on public lands, Hillis et al. (1991) recognized the need for secure areas for elk, areas where the majority of pressures from human hunters were reduced (and at the time, wolves were a minimal predator). Research and management strategies focused on providing areas of elk security, defined as areas of forested cover greater than 250 acres and more than 1/2 mile from any road open during hunting season (Hillis et al. 1991, Figure 18). While the Hillis et al. (1991) paper did not specifically identify open roads during a particular method of hunting season (i.e., rifle or archery), the 35-day general season was mentioned and aligns with the current rifle season, which was used in this analysis. Hillis et al. (1991) recommended that these areas should make up at least 30 percent of a herd unit and be in locations elk are likely to use during hunting season

Broadening the definition of security habitat to include all existing motorized roads and trails open at any time during the year (maximum effect), results in 7,202 acres of the project area currently providing security habitat (areas ≥ 250 acres, $\geq \frac{1}{2}$ mile from any existing motorized road or trail). The proposed action includes over 39 miles of motorized route decommissioning, which analyzed the same way would result in 7,423 acres of security habitat (221 acres gained) (PF-WILD-001). The minimal gains in security habitat are due to the fact that most of the decommissioned roads are not located in existing security habitat. New specified and temporary roads would not reduce security area because they would be closed to public motorized use. The fact that elk numbers in the area are stable or increasing may be a reflection of the rugged

topography in much of the area, which limits hunter access to elk in areas that may not technically qualify as security area. Elk may also escape hunting pressure by moving to private land refuges where hunting is limited or prohibited. The project could result in a minor increase in the number of elk using private land.

Thermal Cover

Thermal cover was analyzed separately within the identified winter range across HD 250 that includes the Mud Creek project area. Winter range in the project area is generally limited to lower elevations along the Nez Perce Fork and West Fork of the Bitterroot River. Most of the project area is too high to be classified as winter thermal cover (PF-WILD-001). Approximately 27% (94,401 acres) of BNF and adjacent private lands in a larger herd unit area defined by HD 250 (355,449 acres) are classified as elk winter range (PF-WILD-001). VMap estimates that about 10,284 acres (11%) of the total winter range area qualify as thermal cover (PF-WILD-001). This amount of thermal cover does not meet either the 20% optimal thermal cover percentage referenced in Guides for Elk Habitat Objectives (USDA Forest Service 1978), nor the 25% minimum standard for thermal cover in winter range set in the Bitterroot Forest Plan Record of Decision.

The purpose of the Forest Plan thermal cover requirement was to provide habitat that, at that time, was believed to be necessary to meet the Forest Plan goals and objectives of maintaining the State's population goals for elk. More recent research, however, has questioned the necessity of thermal cover for survival of wintering elk (Cook et al. 1998). The researchers found "no significant, positive effect of thermal cover on the condition of elk during any of their six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality." Whether thermal cover is necessary for individual elk survival or elk population viability seems open to question (Skovlin et al. 2002, Thompson et al. 2005). As discussed in Chapter 3 of the EA, large amounts of winter range thermal cover do not seem necessary to support the State's elk population goals on the Bitterroot National Forest.

There would likely be little discernable change in elk numbers as a result of implementing the project. However, the combination of reduced cover and increased human access in some parts of the project area could displace more elk onto adjacent private land during some parts of the year. Changes to elk populations resulting from the implementation of the project would be difficult to quantify because elk populations are also affected by hunting regulations, predation levels, and weather, among other factors. The 2019 elk trend count indicated that elk populations across Hunting District (HD) 250, which includes the project area, are generally increasing (Figure 12, Appendix B PF-WILD-001 shows elk population trend), but are still under the range of desired elk population objectives identified in the 2004 Montana Elk Management Plan (MDFWP 2004, amended).

Discussion

Intent of Forest Plan Standards

The Forest Plan standard for elk habitat effectiveness (EHE) cites Lyon et al. (1983) as a standard for road density that should be used to evaluate elk habitat effectiveness. The intent of the standard was to provide better security for animals.

The purpose of the thermal cover requirement was to provide habitat that, at the time, was believed to be necessary to support viable populations of wildlife species and to maintain the current level of big game hunting opportunities (USDA Forest Service 1987, p. II-5).

Elk Habitat Effectiveness

The Forest Plan says Lyon et al. (1983) should be applied to third order drainages. There are 385 third order drainages on the forest which range between 3 – 9,625 acres in size. Only 75 drainages (19%) are >3,000 acres. Lyon et al. 1983 says his standards should be applied to an area >3,000 acres. The standard does not state what roads are to be considered: all roads, all publicly open roads, only roads open during hunting season. Most recently, the Bitterroot National Forest has been using all roads open at any point during the year, maximizing the number of drainages that do not meet the standard. The elk population in the Bitterroot has increased dramatically since the Forest Plan has been written despite non-compliance with this standard in 110 drainages (out of 386 drainages across the forest). Elk habitat "effectiveness" is more related to forage abundance and quality than road density (Ranglack et al. 2016, Crane et al. 2016). Pages 33-38 in PF-WILD-001 discuss existing conditions and effects of proposed actions to elk habitat effectiveness as assessed by existing Forest Plan Standards.

Elk Thermal Cover

Thermal cover is difficult to accurately measure on the landscape. Procedures outlined in Guides for Elk Habitat Objectives (USDA Forest Service, 1978) are no longer used and standards are expressed in crown closure, not canopy cover. This nuance is important in that each is measured differently. As defined by Paletto and Tosi (2009): "The canopy cover can be defined as the percent forest area occupied by the vertical projection of tree crowns (Avery and Burkart 1994; Korhonen et al. 2006), which can be assumed as the true value of the overstorey cover according to Bonnor (1967). The canopy closure has an analogous meaning but it is represented by the proportion of sky hemisphere obscured by vegetation when viewed from a single point (Jennings et al. 1999) and, with the maximum expansion's degree of its angle of view, it is a projection of a hemisphere onto a plane (Daubenmire 1959)".

Closure when measured from the ground using a wide-angle view (spherical densiometer) or from antiquated aerial hemispherical digital photographs overestimate canopy cover (Paletto and Tosi 2009). Furthermore, there is significant variability of results from different techniques to measure canopy closure (Paletto and Tosi 2009). Whereas different techniques to measure canopy cover are more correlated and produce more similar results (Mirik and Absley 2012, Hulet et al. 2013, Richardson and Moskal 2014). Techniques used to measure canopy closure overestimate canopy cover on average by 10.15% (Paletto and Tosi 2009). Therefore, values ≥60% canopy cover likely fulfill the Forest Plan standard of ≥70% crown closure. VMap is the most appropriate tool for assessing canopy cover and other vegetation variables because it captures a moment in time for comparison across the entire forest, uniformly measured, and is sufficiently accurate. VMap accuracy is >90% (Brown 2016). Landscape scale remote sensing mapping is considered suitable for management planning when overall accuracy is >85% (Anderson et al. 1976, Hulet et al. 2013). Pages 33-38 in PF-WILD-001 discuss existing conditions and effects of proposed actions to elk thermal cover as assessed by existing Forest Plan Standards.

Effects of Elk Habitat Effectiveness and Habitat Objectives Amendment

The Forest Plan contains over-arching applicable plan components related to this project-specific amendment including: (1) a forest-wide goal to provide habitat to support viable populations of

native and desirable non-native wildlife and fish; (2) management objectives to provide optimal habitat on elk winter range along with maintaining habitat to support viable populations of wildlife species; and (3) standards regarding elk population status as an indicator of commonly hunted ungulates and the status of their habitat.

Elk are ubiquitous across the Forest and Bitterroot Valley and have continued to increase both in population and range since the 1987 Forest Plan. While the West Fork Herd is still below the state objective set by Montana Fish, Wildlife, and Parks, the population has been increasing steadily. With this plan specific amendment, the project will continue to provide and improve habitat in the project area for elk and other ungulates. While the effects of the amendment would provide a variance for the amount of thermal cover maintained in the project area and provide a variance for some third order drainages to meet the EHE standard, these effects would be minimal. The amendment to thermal cover would allow for treatments that will enhance elk forage across the project area, and although the EHE standard will not be met, elk secure habitat will be increased by the travel management proposed action.

The approximate 48,500 acre Mud Creek project area constitutes less than 14% of the entire Hunt District 250 which contains the West Fork Elk Management Unit, approximately 4% of the entire Bitterroot National Forest lands in Montana, and less than 3% of all hunting districts in the area. Furthermore, the most recent elk population for the entire Hunt District 250 was approximately 900 animals, which constitutes approximately 11% of all elk modeled within this area. It is highly likely that only a portion of all the elk in Hunt District 250 use the project area within their home range, and that the effects of the amendment and the project will generally benefit elk. With this site-specific amendment, it will will allow for activities to occur that maintain the diversity of ecological conditions and improve habitat conditions for elk and other big game species found in the project area.

Cumulative Impact of Elk Habitat Effectiveness and Habitat Objectives Amendment

There have been 12 project-specific amendments related to EHE since the Forest Plan was approved in 1987. There have been 9 project-specific amendments related to thermal and hiding cover. As discussed above, the Forest Plan objective of maintaining the current (1987) level of big-game hunting opportunities has been achieved. The number of hunters, as well as the number of elk, continues to increase, and the general hunting season has remained at five weeks. We have added an elk security analysis (Hillis et al. 1991) to our environmental analysis protocol that has proven to be a better tool than EHE analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with the Montana Department of Fish, Wildlife and Parks.

The Forest has in the past and will continue in the future to conduct other projects and management activities within the analysis area. Prescribed burning projects across the analysis area have served to reduce fuels and provide forage enhancement for elk and other large ungulates. Future projects will continue to use burning as a tool that largely has positive benefits to elk and elk forage. While vegetation management projects both past and future may alter the configuration of roads and road density on the landscape, as well as the amount and distribution of forested stands related to thermal cover and elk habitat effectiveness, the original intent of these standards was to provide better security for animals and provide habitat necessary to support viable populations of wildlife. The analysis of elk security habitat shows the project will provide more security habitat for elk, the elk population in the area is expected to remain stable or

slightly increase, and thus the project is not expected to degrade habitat to the extent that it jeopardizes the public's ability to observe and hunt elk in the area.

In summary, the proposed activities, in combination with past and reasonably foreseeable future actions in this analysis area, are not expected to cumulatively degrade the habitat effectiveness for elk.

Old Growth

The proposed amendment is based on the purpose of the project which is to improve landscape resilience to disturbances (such as insects, diseases, and fire) by modifying forest structure and composition, and fuels. There is a need to amend the plan old growth definition to ensure the project maintains old growth as a key characteristic of terrestrial integrity. During the analysis of the EA, it was determined the amendment would apply to the plan components listed below.

Discussion

The Planning Rule at 36 CFR 219.9(a)(2)(i) requires plan components, including standards and guidelines, to maintain or restore diversity of ecosystems and habitat types throughout the plan area. In doing so, the plan must include plan components to maintain or restore:(i) key characteristics associated with terrestrial and aquatic ecosystem types. Application of this requirement of the planning rule is achieved through Forest Plan goals, objectives, and standards for old growth. All plan standards to maintain old growth would still apply, but the amendment improves the method for measuring the amount of old growth in the project area and evaluating project effects, by modifying the criteria used to identify old growth based on better scientific information than was used in 1987 when the Bitterroot Plan was developed. This plan amendment also applies the requirements through the project design, which supports achieving forest-wide objectives for old growth as a key characteristic of the plan area's terrestrial ecosystems.

Intent of Forest Plan Standards

The intent of old growth management in the Forest Plan (1987) is stated in the Forest-wide resource standard on page II-19 of the plan:

"The amount and distribution of old growth will be used to ensure sufficient habitat for the maintenance of viable populations of existing native and desirable vertebrate species, including two indicator species, the pine marten and pileated woodpecker."

Current Standards and Purpose of Amendment

Forest-wide standard for old growth (stand conditions) (Forest Plan pp. II-19, F.2.e.(2)): that qualify as old growth will vary by habitat type and landform. Criteria to consider for identifying old growth include: Large trees, generally 15 per acre greater than 20 inches dbh for species other than lodgepole pine and 6 inches dbh for lodgepole pine; canopy closure at 75 percent of site potential; stand structure usually uneven-aged or multistoried; snags, generally 1.5 per acre greater than 6 inches dbh and 0.5 per acre greater than 20 inches; more than 25 tons of per acre of downed material greater than 6 inches diameter; heart rot and broken tops in large trees are common; and mosses and lichens are present.

Amendment: The amendment proposes a site-specific modification of this standard and Forest Plan glossary definition to update the project's identification criteria for old growth using the quantitative and qualitative factors of Green et al. 1992, errata corrected 2011. *Green et al.*

represents the Forest Service's best available scientific information to define old growth. This work contains measurable criteria to consistently define old growth based on a regional definition that old growth forests are distinguished by old trees and related structural attributes (Green et al., 2011). The old growth definitions are specific to forest type and habitat type group. Key attributes include age, numbers, diameter of the old tree component within the stand, and stand density. Minimum thresholds have been established for these attributes. Associated characteristics are also defined such as probabilities of coarse woody debris, number of canopy layers, and number of snags over 9 inches diameter at breast height. Therefore, it is a better measure to evaluate whether the project maintains and promotes old growth. The recommended amendment on old growth criteria will identify more old growth (OG) stands in a wider variety of vegetation types. These OG designated stands will be managed for OG with the objective to maintain them into the future by improving stands conditions to make them more resilient to disturbance. In summary, more stands will be managed for OG in Mud Creek and at the Forest scale with the amendment.

Management Area 1 standard for old growth Objectives (Forest Plan pp. III-4, 3(c)(2)): Old growth stands should be 40 acres and larger, distributed over the Management Area. About 3 percent of Management Area 1 suitable timberland, in each third order drainage, will be maintained in old growth. Provide 40 acre stands of old growth by coordinating management activities in this area with activities in adjacent management areas and with intermingled riparian and unsuitable management areas (USDA. 1979).

Amendment: This project-specific modification from this standard is intended to delineate old growth within this management area by stand as identified in Forest Service handbook 2409.17. Old growth will be delineated at the stand level based on vegetation composition and structure as defined by Green et al. (see preceding standard modification description). The 40-acre stand size requirement will be set aside and stands less than 40 acres meeting old growth criteria will be included as they are valuable as a key characteristics of ecosystem diversity. Using that modified measure of old growth, the project will maintain 3 percent of old growth within a 3rd order drainage within Management Area 1.

Management Area 2 standard for old growth Objectives (Forest Plan pp. III-10, 3(c)(2)): Old growth stands should be 40 acres and larger, distributed over the Management Area. About 8 percent of Management Area 2 suitable timberland, in each third order drainage, will be maintained in old growth. Provide 40 acre stands of old growth by coordinating management activities in this area with activities in adjacent management areas and with intermingled riparian and unsuitable management areas (USDA. 1979).

Amendment: This project-specific modification from this standard is intended to delineate old growth within this management area by stand as identified in Forest Service handbook 2409.17. Old growth will be delineated at the stand level based on vegetation composition and structure as defined by Green et al. (see preceding standard modification description). The 40-acre stand size requirement will be set aside and stands less than 40 acres meeting old growth criteria will be included as they are valuable as a key characteristics of ecosystem diversity. Using that modified measure of old growth, the project will maintain 8 percent of old growth within a 3rd order drainage within Management Area 2.

Management Area 3A standard for old growth Objectives (Forest Plan pp. III-16, 3(c)(2)): Old growth stands should be 40 acres and larger, distributed over the Management Area. About 8 percent of Management Area 3A suitable timberland, in each third order drainage, will be maintained in old growth. Provide 40 acre stands of old growth by coordinating management

activities in this area with activities in adjacent management areas especially management Area 3B, riparian areas (USDA,1979)

Amendment: This project-specific modification from this standard is intended to delineate old growth within this management area by stand as identified in Forest Service handbook 2409.17. Old growth will be delineated at the stand level based on vegetation composition and structure as defined by Green et al. (see preceding standard modification description). The 40-acre stand size requirement will be set aside and stands less than 40 acres meeting old growth criteria will be included as they are valuable as a key characteristic of ecosystem diversity. Using that modified measure of old growth, the project will maintain 8 percent of old growth within a 3rd order drainage within Management Area 3A.

Effects of Old Growth Amendment

Wildlife

The project interdisciplinary team (IDT) has designed the proposed action to retain old growth status for any stands being treated that meet the Green et al. (1992, errata corrected 2011) criteria. This will allow the Forest the flexibility to treat conditions related to the purpose and need of this project while retaining the old growth status of stands (as well as enhancing stands that may soon meet the old growth criteria) within the project area. With the project-specific amendment, the plan standards to maintain old growth would still apply, but the amendment improves the method for measuring the amount of old growth in the project area and evaluating project effects, by modifying the criteria used to identify old growth based on better scientific information than was used in 1987 when the Bitterroot Plan was developed. No change to effects on wildlife species associated with or dependent on old growth is expected from this amendment.

Forest Vegetation

As discussed in greater detail in the Forest Vegetation section the EA and SILV-001- Vegetation Report, with the new habitat type-based definitions, more stands, and a greater variety of stands will meet the old growth minimum standards in the Mud Creek project area than would have with the original generic Forest Plan definition. A comparison analysis was completed to compare the difference in the number of stands that qualify as old growth according to the 1987 Bitterroot Forest Plan and according to the proposed amendment using the Old Growth Forest Types of the Northern Region by Green et al. (errata 2011). Table 4, found in SILV-001 – Vegetation Report, displays the number of stands and acres that currently meet the two old growth definitions for ALL stands that have been field verified within the Mud Creek project area. Note: old growth status will continue to be validated through walk-through exams during the implementation phase of the Mud Creek project. See Map 2 (SILV-001) for current old growth status, following 2021 field season. Furthermore, Table 5 (SILV-001) shows that 75% more acres meet the old growth criteria based on the Green et al definition than the Forest Plan definition at the Bitterroot National Forest scale. At both the project scale and the forest-wide scale, the proposed Green el al old growth criteria, based on habitat type group, allows the Forest to identify and manage for more old growth across all forest types on the Bitterroot National Forest. This amendment provides a better foundation to meet the purpose and need of the project, meet the Forest Plan goals and objectives, meet the 2012 Planning Rule requirements, and maintain and manage old growth in the Mud Creek project area.

The proposed site-specific Forest Plan amendment would allow treatments to be carried out that would specifically improve the resilience of old growth stands. Treatments including commercial

harvest utilizing improvement cuts, non-commercial stand improvement thinning and low intensity prescribed fire will be used to reduce competition and improve species composition while retaining the old growth characteristics, as defined by Green et al (1992, errata corrected 2011). Treatments would reduce competition by removing competing in-growth, improve species composition, and reduce fuels in old growth stands, especially in the drier forest types such as those most commonly found within the Mud Creek project area. To maintain or restore old growth character within existing old growth, site-specific treatments will be implemented to increase resiliency and resistance to disturbances such as insects, disease, and fire. Indirectly, the removal of competing in-growth will improve the old growth stands resilience to future fire and insect disturbances compared to existing conditions.

Cumulative Impact of Old Growth Amendment

There are two other projects currently being planned on the Forest that also include site-specific plan amendments related to old growth (Gold Butterfly and Bitterroot Front). These project-specific amendments propose to make the same changes to the definition of old growth (consistency with *Green et al*). This will align all three projects in regards to old growth classification.

The intent of the Forest Plan old growth direction is to ensure sufficient habitat for wildlife, including two indicator species, the pine marten and pileated woodpecker. The anticipated effects of the plan amendments associated with Gold Butterfly and Bitterroot Front would be similar to those analyzed and disclosed in this document. When taking these projects into account with the amendment proposed here, the cumulative impact of all three amendments would have the benefit of providing consistent, non-subjective method of identifying old growth in these areas. Updating the definition of old growth would not affect the amount of habitat available for species such as pileated woodpeckers or marten.

Coarse Woody Debris

The proposed project specific amendment will modify the plan standards to achieve Forest Plan and project goals and objectives while applying the best available scientific information to the Mud Creek project's coarse woody debris design. The purpose of the coarse woody debris amendment is to resolve the contradictory direction within the existing standards and ensure the amount of coarse woody debris to be left on the ground aligns with the historical ranges identified for the Fire Groups present within the project area. Fire Groups are described in chapter 3 of the final environmental assessment and depicted in a map in appendix C of the final environmental assessment. The proposed, ecologically-based modified standard would replace, for this project, the management area standards in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-6, f(4); III-12, f.(3); III-19, f(4)), and pp. III-13, j (2)).

Discussion

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Fisher & Bradley, 1987; Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. Brown et al. (2003) suggested to encourage a diversity of wildlife species, a worthy objective may be to manage for a wide range of CWD across the landscape, to achieve benefits and avoid excessive wildfire threat. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). Also, to reduce fire

intensity and protect soil productivity, heavy amounts of coarse woody debris should not be left in treated stands in the Mud Creek project area.

MA 1, 2, 3a, and 3c: (USDA Forest Service 1987, pp. III-6, f (4); III-12, f (3); and III-19, f (4))

Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

MA 2 (USDA Forest Service 1987, pp. III-13, j (2))

Natural and activity fuels will be treated to reduce slash depth below 1 ½ feet to provide for biggame movement. About 25 tons/acre of down trees larger than 6-inch diameter will be left for nongame habitat if available.

The proposed project specific amendment will modify the plan standards to achieve Forest Plan and project goals and objectives while applying the best available scientific information to the Mud Creek project's coarse woody debris design. The purpose of the coarse woody debris amendment is to resolve the contradictory direction within the existing standards and ensure the amount of coarse woody debris to be left on the ground aligns with the historical ranges identified for the Fire Groups present within the project area. The proposed, ecologically-based standard would replace, for this project, the management area standards in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-6, f(4); III-12, f.(3); III-19, f(4)), and pp. III-13, j (2)). Fire Groups are described in detail within the Fire and Fuels report (PF-FIRE-001).

Amendment: The modified project-specific coarse woody debris standard to be applied for the Mud Creek project would read:

"To maintain soil productivity and wildlife habitat, coarse woody debris (material greater than 3 inches in diameter) will be left at or above the minimum levels identified in the following table. Within harvest units, course woody debris will be evenly distributed on each acre. At least minimum levels will also be retained after non-commercial and prescribed fire treatments.

Fire Group	CWD Ranges (tons/acre)		
0	0-5		
2	5-10		
4	5-10		
5	10-20		
6	10-20		
7	8-24		
8	8-24		
9	8-24		
10	8-24		
11	20-30		

Wood larger than 15 inches in diameter will not be intentionally ignited during hand lighting. It is understood that once the fire is lit by hand crews, the fire may burn into large CWD and combust various pieces."

Intent of Forest Plan Standard

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- Maintain soil productivity.
- Design fire management programs that are consistent with other resource goals
 (Appendices K and M) Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7).

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5 - II-7)

- Maintain habitat to support viable populations of wildlife species.
- Design management activities to maintain soil productivity.
- Eliminate backlog of fuels.

Effects of the Coarse Woody Debris Amendment

Amending the plan site-specifically to modify direction related to coarse woody debris would still help achieve the Forest Plan goals and objectives of maintaining soil productivity, providing nongame habitat, reducing fuel backlog and fire management. Modifying plan direction will allow for science based fuels management as the amount of coarse woody debris to be left on-site will better align with the levels that would have been present historically within each representative Fire Groups. Maintaining coarse woody debris within historic ranges will reduce fire severity and impacts to soils from long-duration burning of excessive large wood.

The modified plan direction will allow proposed project activities to occur that will maintain or restore ecological integrity by moving stand conditions towards their historical composition and function. There will be an increased opportunity to return fire to the landscape and move the project area towards having historic fire return intervals.

The proposed fuel treatments would leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide an opportunity for the nutrients in the slash to be leached into the soil. With this site-specific amendment, it will maintain or improve CWD for soil productivity and wildlife habitat and aid in managing fuels for fire management.

Cumulative Impact of Coarse Woody Debris Amendment

The CWD requirements for the Mud Creek project are discussed in the soils section of Chapter 3 in the Mud Creek EA. The CWD requirements are based on current science, which varies from the amounts shown in the Forest Plan. The amended CWD requirements for this project will encompass less than 3 percent of the Bitterroot National Forest. Since the 1987 Forest Plan, previous forest plan amendments have been made to adjust CWD levels. Site-specific forest plan amendments were needed to ensure CWD retention in fuel reduction treatments were based on current science. Previous forest plan amendments in combination with the proposed action of this project cumulatively amount to 4.5 percent of the overall acreage for the Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects on soil productivity or game habitat at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Mud Creek project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.



Northern Region September 2023

Programmatic Amendment for Elk Habitat, Old Growth, Snags and Coarse Woody Debris Objectives - Bitterroot Forest Plan

Bitterroot National Forest

Ravalli County and Missoula County, Montana; Idaho County, Idaho Decision Notice









Decision Notice

I approve the amended components as modified in Alternative C. Alternative C is inclusive of the components and glossary items in Alternative B, except as modified in Alternative C. This was analyzed in the 2023 Environmental Assessment for the Programmatic Amendment for Elk Habitat, Old Growth, Snags and Coarse Woody Debris Objectives for the 1986 Bitterroot Forest Plan. The environmental assessment and Finding of No Significant Impact are incorporated by reference. The final component and glossary language is included in Appendix A to this Decision.

This Decision Notice complies with 36 CFR 219.14 and 220.7, and with the 2012 Planning Rule [77 FR 21162-21276] as amended [81 FR 90723-90739] in 2016.

The Rationale for Approval

This amendment will codify the approach the Bitterroot National Forest has taken over the last 25 years in applying best available science to elk habitat, and for the last two decades in applying best available scientific information to identifying and managing old growth. It rectifies inconsistencies in the plan regarding coarse woody debris and snags. It does not signal a change in how the forest will generally be managed in any site-specific project, only making minor changes in the amounts of coarse woody debris to be left and allowing dead trees to be removed for salvage and firewood cutting. Snags and coarse woody debris will remain in future vegetation management units in similar amounts to those described in the existing forest plan. This amendment will create efficiencies for future projects that can avoid additional planning processes.

How Public Comments were Considered

As described in the environmental assessment, two scoping periods and a 30-day comment period were held. Forest leadership and resource specialists met multiple times with the Ravalli County Collaborative to discuss the amendment. Comments were received from 36 parties during the 30-day comment period held in February 2023. Comments were addressed in detail in the project record at O-38 and posted on the forest website. Alternative C with modifications to guidelines and additional glossary items were added in response to public comment, as were alternatives considered but not analyzed in detail.

There appeared to be a misconception among several parties that changing the definition of old growth would lead to wholesale logging of old growth stands down to the minimum characteristics, such as trees per acre, described in Green et al. 1992 rev. 2011. This is not the intent. The intent is to apply a scientific basis applicable to local site conditions to identify old growth stands, and then manage them as such. Consideration of the suitable prescription for any given stand is applied during project planning; the amendment is guidance and does not compel any management actions. This amendment allows for additional acres of old growth to be identified and removes a standard that allowed for regeneration of old growth stands when other stands reached that successional stage. In response to objections on the draft Decision, I have changed component FW-GDL-VEG-01 from a guideline to a standard as FW-STD-VEG-01. Any treatments in old growth stands will now have strict sideboards. Site-specific prescriptions in future projects will be analyzed by an interdisciplinary team of resource specialists, just as they have since 1970. The desired condition is to *increase* the amount of old growth on the landscape across the forest.

Some members of the public claimed the amendment will not comply with Executive Order 14072 because it allows for vegetation treatments in old growth. The Executive Order calls for climate-smart forestry to promote resilience, and recognizes the primary threats to forests, including old growth and mature forest, include climate impacts, catastrophic wildfires, insect infestation, and disease. Actions to conserve, restore, reforest, and manage our forests will include various forms of vegetation management, and the components in the amendment support this. Eliminating the existing standard in the Forest Plan at F.1(e)(5) that allowed for regeneration harvest of old growth simply when more was found aligns with EO 14072 and supports the desired condition to increase the amount of old growth.

Additionally, I must balance expectations for fuel reduction to address the wildfire crisis in recent laws, such as Bipartisan Infrastructure Law and the Inflation Reduction Law, with calls from some members of the public to conserve all mature and old growth forest. Since the year 2000, 371,853 acres have burned in wildfires with moderate to severe effects on the Bitterroot National Forest, compared to a harvest of 37,783 acres since 2000. Clearly, the largest threat to our National Forest System lands is wildfire exacerbated by climate change, not forest management.

The agency recognizes the role large trees play in sequestering carbon and their importance in mitigating climate change. The components allow for treatment to improve the likelihood a wildfire will not result in total loss of an old growth stand. Carbon sequestration and climate concerns will continue to be recognized in every project the Bitterroot National Forest may propose. Some asked that carbon sequestration be part of the definition of old growth. The benefit of the definition of characteristics as defined by Green et al. (2011) is that they can be identified in the field. Carbon accounting does not fit that model. Carbon sequestration is inherent in the structure of the stand and can be quantified as needed.

Others insisted that a map is part of the inventory requested in EO 14072. It is not. President Biden asked for a national inventory and Region 1 has fulfilled this request. The inventory is based on Forest Inventory and Analysis plots, not stands. Stands are mapped during project planning. It is impractical to conduct stand examinations across the entire forest. Old growth is a successional stage, it is not a permanent location in the Forest.

It was suggested that the Forest can only comply with the executive order by including components for mature forest. The Washington Office, in response to EO 14072, has provided a definition for mature forest and has issued an advanced notice of proposed rulemaking. See https://www.fs.usda.gov/managing-land/old-growth-forests for more information. This amendment has a limited scope for efficiency based on the purpose and need and it is premature to identify mature forest plan components given rulemaking has just been proposed. When that rulemaking is complete, the Forest Plan will be adjusted as necessary to comply with those new regulatory requirements.

I was asked by some to wait until Forest Plan Revision to change any components. Forest Plan Revision is a major undertaking and can be years in the process. The 2016 amendment to the 2012 Planning Rule encourages amendments as needed. This amendment will allow me to propose needed fuel reduction projects in the near future, as requested by Congress and the Administration with the Inflation Reduction Act and the Bipartisan Infrastructure Law.

Some members of the public insisted that an environmental impact statement was the only acceptable and legal NEPA document, solely based on the forest-wide scale. This is not the case. According to the planning regulations at 36 CFR 219.13(b)(3), the appropriate NEPA documentation for an amendment may be an environmental impact statement, an environmental assessment, or a categorical exclusion, depending upon the scope and scale of the amendment *and* its likely effects. Internal and external scoping and analysis did not reveal any components that were likely to create significant environmental effects, regardless of the forest-wide application of the components. The EA substantiates that an EIS is not required and concludes with a Finding of No Significant Impact (36 CFR 219.13(b)(5)(ii)(B). Because the appropriate NEPA documentation for this amendment is an environmental assessment and a decision notice, it is not considered a significant change to the plan for purposes of the NFMA (36 CFR 219.13(b)(3)).

The identification of a four-fold increase in acres to be managed into the future as old growth is a beneficial effect to all resources, including climate and carbon sequestration.

The components in the amendment do not signal a major change in the management activities proposed across the Forest, but rather represent a codification of a long succession of similar site-specific project amendments.

Please see Appendix A of the Environmental Assessment for a summary of responses to comments, and O-38 in the project record.

How was the Best Available Scientific Information used to Inform the Amendment Components Several recent research papers regarding elk habitat (Proffitt et al. 2016, Ranglack et al. 2016, Lukacs et al. 2018, Devoe et al. 2019, Robatcek 2019, Ranglack et al. 2022) have found nutritional resources were the most important factors associated with elk summer resource selection. Ranglack's 2022 research was focused on findings from western Montana, where the Bitterroot National Forest is located. Proffitt's 2016 research was conducted on the Bitterroot National Forest.

"Old Growth Forest Types of the Northern Region" by Green, Joy, Sirucek, Hann, Zack and Naumann (Green et al. 2011), is considered the definitive research specific to old growth habitat and growing conditions in western Montana and the Bitterroot National Forest. It provides an analysis process for classifying old growth types and has been applied and/or adopted by most of the national forests in Region One. The criteria as defined in Green et al. is adopted as the new definition of old growth for the Bitterroot National Forest and the paper is adopted into the Forest Plan as a whole. The role of old growth as a carbon sink was also used to inform the amended components. Climate and carbon scientific studies (Stephenson et al. 2014, Mildrexler et al. 2020, Law et al. 2021) provide the basis for removing the standard allowing the regeneration harvest of old growth stands when other stands reach that successional stage. Conservation of old growth and large trees is recognized as important for carbon storage and the myriad of other ecosystems services they provide, as described in E.O 14072.

Snags have long been recognized as important structure for wildlife habitat and a key element in soil function and process. The proposed plan amendments for snags build off of the principles of ecosystem management that were crafted into the Northwest Forest Plan in the 1990s. These efforts emphasized the recognition of biological legacies such as snags and logs after forest disturbance and remain valid today. The new plan components apply these concepts and are tailored to the Bitterroot National Forest habitat. Research by Evelyn Bull and others (1980, Bull 1983, Bull et al. 1992, Bull 1994, Bull and Jackson 1996, Bull et al. 1997, Bull and Heater 2000, Bull et al. 2005, Bull 2009, Bull and Jackson 2011), Franklin et al. (2002), Spiering and Knight (2005), Kirk and Naylor (1996), Lorenz et al.(2015), Harris (1999), Mannan and Meslow (1984), and Simard et al. (2021), Cunningham et al. (1980) Bunnell et al. (2002) contributed to the development of components and to the analysis of effects. Appendix C was added to the EA to describe the basis for changes to desired condition and guidelines for snags. See EA Table 4.

Coarse woody debris is recognized as important to invertebrates, vertebrates, fungi, mycorrhizae, and soil function and process. Too much CWD can be a fuel hazard. Key literature was considered for components and analysis (Brown and See 1981, Fischer and Bradley 1987, Harvey et al. 1987, Harvey et al. 1988, Graham et al. 1994, Harvey 1994, Bull et al. 1997, Brown and Smith 2000, Bull 2002, Brown et al. 2003, Woodall and Williams 2007, Smith et al. 2017, Simard et al. 2021).

Literature contributed by members of the public was also considered as documented in the project file. While more literature may exist on any of the four resource areas considered in the amended components, an exhaustive list does not lead to a different conclusion. The scientific information included here and in the environmental assessment is the best available to demonstrate an understanding of ecosystem processes and the balance between needed management and public desires. Please see the 12-page Works Cited section in the EA for the full names of the scientific research documents.

Effective Date of the Amendment

The amendment is effective immediately upon approval (36 CFR 219.17(a)(2).

How did the Responsible Official Determine the Scope and Scale of the Plan Amendment The scope of the amendment was determined based on the purpose and need for action as described in the environmental assessment. The scale of the amendment was influenced by the following considerations:

- The elk components were applied Forest-wide and by elk management unit/hunting district because the best scientific information applies to elk habitat across the forest. Characteristics of each elk management unit/hunting district were considered when creating guidelines.
- Forest-wide application of the Green et al. 2011 definition of old growth was appropriate because the research was place-based on local habitat types, forest types, and growing conditions. Removal of specific standards for management areas 1, 2, 3a, 3b and 3c was appropriate to allow for the inclusion and management of old growth stands less than 40 acres and equal to or larger than five acres. Arbitrary percentages of the area to be maintained as old growth were removed and replaced with the simple desired condition that the amount of old growth should increase, relative to the existing condition. Forest-wide standards apply to all management areas.
- Snag components regarding the number of snags to be left in harvest units are forest-wide and based on research and Forest Inventory and Assessment inventories for the Bitterroot National Forest. All snags that do not pose a safety hazard will be retained in riparian areas.
- The amendment resolves issues with conflicting amounts of coarse woody debris described for management areas 2 and 3b, and replaces those standards for management areas 1, 2,3a, and 3c with desired conditions for the range of tons per acre of coarse woody debris to be left in treatment units based on habitat type fire groups, forest wide.

Which Specific Requirements within 219.8 through 219.11 apply to the amendment and how they were applied.

The purpose of the amendment is to update current plan direction for elk habitat, old growth, coarse woody debris, and snags based on current best scientific information regarding the management of these characteristics of habitat diversity. Based on the environmental assessment, I have determined the amendment will not substantially lessen protections for any resource or species, nor are there any substantial impacts. Based on the purpose and likely effects of the amendment, I determined the directly related requirements include:

- 1. the requirements to maintain or restore the ecological integrity of terrestrial ecosystems taking into account interdependence of terrestrial and aquatic ecosystems in the plan area, ecological conditions in the broader landscape that may influence the sustainability of resources, system drivers (such as natural succession and wildland fire) and the ability of terrestrial ecosystems in the plan area to adapt to change and opportunities for landscape scale restoration at 36 CFR 219.8(a)(1) (i), (ii), (iii), (iv) and (vi).
- 2. the requirement that a plan must include plan components to maintain or restore soils and soil productivity, including guidance to reduce soil erosion and sedimentation at 36 CFR 219.8(a)(2)(ii)
- 3. the requirements to provide for habitat diversity by maintaining or restoring key characteristics associated with terrestrial ecosystem types at 36 CFR 219.9(a)(2)(i).
- 4. the requirement to provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capability of the plan area; that habitat conditions for wildlife, fish, and plants commonly enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence or other activities (in collaboration with federally recognized Tribes and State and local governments, system drivers, such as natural succession, wildland fire, and climate change, at 36 CFR 219.10(a)(1), (5) and (8).

The components for old growth, snags, and coarse woody debris were developed to maintain terrestrial ecosystems in the plan area, sustain resources, system drivers and the ability to adapt to change and allow for landscape scale restoration. Aquatic ecosystems will remain generally unaffected by the amendment.

The components for snags and coarse woody debris will maintain or restore soils and soil productivity by retaining adequate material for structure, function, and process of soils, in addition to providing habitat for birds, amphibians, small mammals, insects, fungi and microbes. These same components, along with those for old growth, provide for habitat diversity because of the key characteristics they maintain in the terrestrial ecosystem.

The components for elk habitat, old growth, snags, and coarse woody debris all provide for ecosystem services and multiple uses. Elk and old growth contribute to outdoor recreation, hunting, gathering, and observing. Old growth, snags, and coarse woody debris provide for system drivers such as natural succession, wildland fire, and climate change by storing carbon, allowing for vegetation treatments to increase resilience to wildland fire, and recognizing natural succession of forested stands. All components consider habitat conditions for wildlife and plants. Fish are not expected to be affected by the components.

Therefore, I've determined I've applied the directly related substantive requirements via the new and modified plan components included in this decision.

Findings required by other laws and regulations applicable to the decision

Endangered Species Act

Consultation was conducted in 2020 for grizzly bear in a biological assessment that considered the combination of travel planning on the Bitterroot National Forest, proposed elk components, and ongoing implementation of the Forest Plan. The determination was that the combined projects were *likely to adversely affect grizzly bears*. A Biological Opinion was received from the USFWS in 2021. Subsequent biological assessments were conducted for wolverine, grizzly bear, bull trout, bull trout critical habitat and whitebark pine considering all of the components in the amendment. The additional components for old growth, snags and coarse woody debris are not expected to change the determination for grizzly bears consulted upon in 2020 and 2021, as included in the cover letter to the USFWS when the biological assessment for wolverine was transmitted. Informal consultation was conducted with the US Fish and Wildlife Service for the proposed species wolverine, and concurrence was received (06/02/2023) on the determination that the amendment is *not likely to jeopardize the existence of Gulo gulo luscus*. Canada lynx, yellow-billed cuckoo, and monarch butterfly were excluded from detailed analysis because there is no known species occurrence on the Forest. The determinations for bull trout, bull trout critical habitat, Canada lynx critical habitat, and whitebark pine are *no effect*.

National Forest Management Act

NFMA requires the development, maintenance, amendment, and revision of land management plans (forest plans) for each unit of the National Forest System. These plans provide for multiple use and sustained yield of renewable resources in accordance with the Multiple Use Sustained Yield Act of 1960 and include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. The NFMA states land management plans "may be amended in any manner whatsoever after final adoption after public notice". The NFMA's implementing regulations at 36 CFR 219 describe the process and requirements of developing, revising, and amending land management plans. This amendment has been conducted consistent with those requirements.

Format of Amended Plan Components

As required at 36 CFR 219.13(b) all new and modified plan components are consistent with the format described at 36 CFR 219.7(e).

Project and Activity Consistency

Authorizations of occupancy and use made before this decision document is approved may proceed unchanged until time of reauthorization. At time of reauthorization, all permits, contracts, and other authorizing instruments must be made consistent with the plan as amended, subject to existing valid rights. Projects and activities

authorized after approval of the plan amendment must be consistent with the amended plan components as provided in 36 CFR 219.15(d).

The consistency provisions at 36 CFR 219.15(d) apply only to the plan component(s) added or modified under the 2012 Planning Rule. With respect to determinations of project consistency with other plan provisions not amended here, the Forest Service's prior interpretation of consistency (that the consistency requirement applies only to plan standards and guidelines) applies. (FSH 1909.12, ch. 20, sec. 21.33.)

National Environmental Policy Act

NEPA provisions have been followed as required by 40 CFR 1500. The effects of the plan amendment are documented in the final EA pursuant to FS NEPA regulations at 36 CFR 220. As there are no significant effects associated with the amendment, it is not considered a significant amendment for the purposes of NFMA. This Decision Notice complies with the intent and requirements of NEPA.

The public involvement and scoping section of the EA describes the steps we took to provide information on the project and solicit comments. Issues identified during the two proposed action scoping periods for the Amendment assisted the interdisciplinary team and me in component design and with the analysis process. Project file exhibit folders B, C, and D contain public involvement documentation (mailings, news releases, newspaper articles) and comments received. Appendix A of the final EA provides a summary of comments and responses to comments received during the EA comment period. The environmental assessment resulted in a finding of no significant impact on the human environment. This Decision Notice describes my decisions and rationale.

Clean Water Act and Montana State Water Quality Standards

The Amendment does not directly affect streams and water quality remains protected. There are no ground-disturbing treatments, such as road construction or vegetation harvest, associated with the decision. Water quality would remain unchanged from the existing condition (updated EA p. 62).

Clean Air Act

The components in the decision will have no effect on State or Federal air quality requirements.

<u>National Historic Preservation Act, American Indian Religious Freedom Act, and Native American Graves</u> <u>Protection and Repatriation Act</u>

The amendment includes no ground-disturbing activities and will have no effect on historic properties.

Government to Government Relations

The Amendment was included in the 2023 cultural program consultation with affiliated Native American Tribes as per regulatory requirement, Executive Order 13175 Consultation and Coordination with Indian Tribal Government. The proposed action would not infringe on the inherent rights invoked by the American Indian Religion Freedom Act of 1978, as amended. Further, there are no ground-disturbing activities associated with this planning document amendment. Potential impacts to sacred sites, places of cultural and religious significance, and other key considerations will be consulted upon with affected Tribes during the planning stages of separate future actions (Executive Order 13007 Indian Sacred Sites).

Objections

This decision was subject to administrative review prior to approval of this document. Five objections were submitted regarding the Draft Decision Notice (36 CFR 219.52). Objectors raised similar issues to those addressed on pages 2 and 3 of this Decision and in Appendix A of the environmental assessment. The Deputy Regional Forester, as objection reviewing officer, held a resolution meeting with three of the five objecting parties

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on July 7, 2023, and no resolution was reached. However, the objection reviewing officer, in their August 16, 2023 letter to objectors, directed me to change FW-GDL-VEG-01 to a standard. See Appendix A. This change does not make any material difference in the effects analysis findings.

During the objection review process, errors were found in the table and inconsistencies in the guidelines for snags. Correct numbers from research sources are now included and the guidelines were reworded for consistency. These do not materially change the effects analysis for wildlife, vegetation, soils, water and fish, recreation or fuels. In response to objection issues, additional information was added to the analysis of effects to black-backed woodpecker as a snag-associated species. Additional verbiage was added to the EA regarding the effects of coarse woody debris, snags and old growth components on grizzly bears. Effects remain insignificant.

Objectors asked for a change to FW-GDL-VEG-01 (now FW-STD-VEG-01) to eliminate the phrase "or new best available science". This phrase was removed. A table depicting old growth characteristics from Green et al. 2011 for western Montana was added to make it clear that Green et al. 2011 is to be incorporated as a whole.

Objectors pointed out that MA 3b was not specifically included in the old growth definition change. Therefore, it was made clear that the desired future condition for old growth and use of Green et al. 2011 is meant to be applied forest-wide, including MA 3b. Errata is listed in the final EA published with this Decision Notice.

The purpose of the objection process is to provide a pre-decisional administrative review that will result in an improved decision. The EA and Decision have been updated to reflect certain objection issues. The objection reviewing officer found that other objection issues were satisfactorily addressed in the body of the EA, in the Response to Comments Summary in EA Appendix A, or in the project record at O-38.

MATTHEW D. ANDERSON

Bitterroot Forest Supervisor

Date

APPENDIX A – Amended Components for the Bitterroot Forest Plan

Vegetation Component Identifiers in Amendment 40 Environmental Assessment and Components in the Decision Notice. Decision Notice is Final.

Environmental Assessment	Decision Notice (Appendix A)				
Old Growth Components					
FWD-DC-VEG-01	FWD-DC-VEG-01				
FW-GDL-VEG-01	FW-STD-VEG-01				
FW-GDL-VEG-02	FW-GDL-VEG-01				
Snag Cor	mponents				
FW-DC-VEG-02	FW-DC-VEG-02				
FW-GDL-VEG-03	FW-GDL-VEG-02				
FW-GDL-VEG-04	FW-GDL-VEG-03				
FW-GDL-VEG-05	FW-GDL-VEG-04				
FW-GDL-VEG-06	FW-GDL-VEG-05				
FW-STD-VEG-01	FW-STD-VEG-02				
MA3b-STD-VEG-01	MA3b-STD-VEG-01				
Coarse Woody Debris Components					
FW-DC-VEG-03	FW-DC-VEG-03				
FW-GDL-VEG-07 FW-GDL-VEG-06					

Elk and Soil Component Identifiers, as well as glossary items, remain consistent between the Final EA and DN.

- **Desired Condition** A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.
- **Objective** A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.
- **Standard** A mandatory constraint on project and activity decision-making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
- **Guideline** A constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
- Goal A broad statement of intent, other than desired conditions, usually related to process or interaction with the public. Goals are expressed in broad, general terms, but do not include completion dates.

New plan components are numbered for reference. Unchanged and unmodified plan components would retain their numbers as listed in the Forest Plan. New plan components have been numbered using a combination of codes in the following format: XX-XX -WLF-ELK-XX. The initial code indicates the area to which the component applies, including FW for forest-wide and GA for geographic area. Each geographic area additionally includes the codes WB for the West Bitterroot Hunting District, EFB for the East Fork Bitterroot Hunting District, NS for the North Sapphires Hunting District, WFB for the West Fork Bitterroot Hunting District, and IDAHO for the Idaho portion of the Forest. The second code

indicates the type of plan component, including DC for desired conditions, OBJ for objectives, STD for standards, GDL for guidelines, and GOAL for goals The third code indicates the broad resource area to which the component applies; for each new plan component under this amendment, the resource area code is WLF for wildlife. The fourth code "ELK" indicates that the component was introduced as part of the plan amendment for elk habitat objectives. The final code indicates the plan component's number.

Elk Habitat Effectiveness and Thermal Cover

The following components are **removed** from the Bitterroot Forest Plan:

Forest-wide Desired Condition at the End of the Fifth Decade

Cover on winter range will have been maintained at the desirable level of 40 percent of the winter range area. (Chapter II, Section E.2(c))

Forest-wide Standards

Big-game cover/forage relationships, as described in Guides for Elk Habitat Objectives (USDA, 1978), will be a consideration in planning timber management activities. (Chapter II, Section F.1(e)(12))

Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built. (Chapter II, Section F.1(e)(14))

If, for three years running, the bull elk harvest during the first week of the hunting season exceeds 40 percent of the total bull harvest, additional fall road closures will be considered. (Chapter II, Section F.1(e)(15))

Management Area Standards

Management Area 1

Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards in Chapter II (Lyon 1983). (Chapter III, Section B.3(c)(4))

Management Area 2

Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards in Chapter II (Lyon 1983). (Chapter III, Section C.3(c)(4))

Guides for Elk Habitat Objectives (USDA Forest Service 1978) will be followed in prescribing any timber harvest in this management area. The following timber management standards are desirable on winter range:

- a. Even-aged management.
- b. Precommercial and commercial thinning.
- c. Establish or maintain a mixture of ponderosa pine and Douglas-fir.
- d. Rotations will be greater than culmination of mean annual increment to provide for 20 to 30 percent of the rotation length in thermal cover and 55 to 65 percent of the rotation length in forested or open forage. The rest of the rotation will be in hiding cover.

e. Timber harvest on land unsuitable for timber production is appropriate for meeting cover/forage objectives if other resource objectives including soil and water can be met. (Chapter III, Section C.3(e)(1))

Management Area 3a

Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards in Chapter II (Lyon, 1983). (Chapter III, Section D.3(c)(4))

Close the road through Signal Creek to motorized vehicles during hunting season. (Chapter III, Section D.3(c)(5))

Management Area 3b

Maintain the elk habitat effectiveness standards of the surrounding management areas through road closures as specified in the Forest-wide standards in Chapter II (Lyon, 1983). (Chapter III, Section E.3(c)(11))

Management Area 3c

Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards in Chapter II (Lyon, 1983). (Chapter III, Section F.3(c)(4))

Management Area 8a

Maintain elk habitat effectiveness through road closures as specified in the Forest-wide standards in Chapter II (Lyon, 1983). (Chapter III, Section L.3(c)(2))

Management Area 8b

Maintain elk habitat effectiveness (Lyon, 1983) in conjunction with the contiguous winter range management area as specified in Forest-wide standards Chapter II and Management Area 2. Chapter III, Section M.3(c)(1)

Glossary

ELK HABITAT EFFECTIVENESS - An index of the capability of an area to provide security for elk. It is based on hiding and thermal cover present and roads open to public motorized use

Modified Amendment Components for Elk

These components are added to and amend the Bitterroot National Forest Plan:

Forest-wide Desired Condition

FW-DC-WLF-ELK-01: The Forest supports a diversity of elk habitats that provide for ecological conditions that supplement diverse recreational opportunities including wildlife enjoyment, viewing, and hunting.

Forest-wide Guidelines

FW-GDL-WLF-ELK- 01: Motor vehicle use designations should be designed to maintain elk residency on National Forest System lands during the archery and rifle big game hunting seasons by maintaining contiguous blocks of secure habitat in locations elk traditionally use at times when they are vulnerable to disturbance from hunting or other recreation that may cause displacement from public lands. No additional roads, trails, or areas should be designated for motor vehicle use if project-level analysis indicates a likelihood of disturbance significantly affecting elk behavior

- or distribution, if elk use of National Forest System lands in the plan area has declined independent of population size, or in areas of low-quality forage.
- **FW-GDL-WLF-ELK-02:** Vegetation management project activities on known elk winter, spring and summer foraging areas should contain vegetation treatments to increase elk forage quality to help alleviate elk conflicts with adjacent landowners and maintain elk residency on National Forest System lands.
- **FW-GDL-WLF-ELK-03**: Vegetation management project activities and travel management decisions should be located and scheduled to minimize disturbance of elk on known winter range during the winter and in known calving areas during the reproductive season to avoid stressing elk when energy demands are high. Exceptions may occur when needed for protection of other resources as mandated by law, regulation, or policy. In such cases, concentrating management actions in time or space could be a method to minimize disturbance and reduce impacts to elk.
- **FW-GDL-WLF-ELK-04**: To help maintain or restore habitat connectivity, vegetation management project activities and travel management decisions should not create movement barriers to elk in known migration corridors, except where necessary to provide for human health and safety.
- **FW-GDL-WLF-ELK -05**: To maintain connectivity with adjacent lands, vegetation management project activities should be compatible with habitat management goals on adjoining State or Federal lands (for example, project planning should not be detrimental to elk winter range next to State Wildlife Management Areas where winter range management is the goal).

Geographic Area Guideline HD240 West Bitterroot

GA-GDL-WB-WLF-ELK-01: Wildfires in the Selway-Bitterroot Wilderness should be managed employing minimal impact suppression tactics where feasible to enhance high alpine elk forage.

Geographic Area Guideline North Sapphires (multiple HDs)

- **GA-GDL-NS-WLF-ELK-01**: All new permanent road construction should be for administrative use only to minimize pressure on elk.
- **GA-GDL-NS-WLF-ELK-02**: Vegetation management project activities should contain vegetation management treatments to increase elk forage quantity and nutritional quality on National Forest System lands to help reduce elk conflicts with adjacent landowners.

Geographic Area Guideline HD270 East Fork Bitterroot

- **GA-GDL-EFB-WLF-ELK-01**: All new permanent road construction should be for administrative use only to minimize additional pressure on elk that may contribute to movement to adjacent private lands during the archery or rifle hunting seasons. Exceptions may be made in the case of existing roads needing relocation.
- **GA-GDL-EFB-WLF-ELK-02**: To help maintain or restore habitat connectivity for elk, there should be no net increase in permanent motorized route density at the project scale.

Geographic Area Guideline HD250 West Fork Bitterroot

GA-GDL-WFB-WLF-ELK-01: Vegetation management project activities should contain vegetation management treatments to reduce conifer encroachment on open grassland slopes where applicable to increase spring elk forage.

- **GA-GDL-WFB-WLF-ELK-02**: Wildfires in the Selway-Bitterroot Wilderness meeting management direction and suppression strategies required for health and human safety should employ minimal suppression where feasible to enhance high alpine elk forage.
- Geographic Area Guideline Idaho Management Unit
- **GA-GDL-IDAHO-WLF-ELK-01**: To increase elk forage, treat to reduce invasive plant or noxious weed occurrence where applicable in conjunction with other management activities.
- **GA-GDL-IDAHO-WLF-ELK-02**: Wildfires in the Selway-Bitterroot Wilderness meeting management direction and suppression strategies required for health and human safety should employ minimal suppression where feasible to enhance high alpine elk forage.

Forest-wide Goals

- **FW-GOAL-WLF-ELK-01**: Forest Service and Montana Fish, Wildlife, and Parks biologists cooperate to identify potential needs for and means to achieve desired distribution, viewing, and hunting opportunities of elk.
- **FW-GOAL-WLF-ELK-02**: Through cooperation with willing landowners and other entities, opportunities are identified to conserve or manage non-Federal lands within or adjacent to the national forest boundary to benefit elk.
- **FW-GOAL-WLF-ELK-03**: The Forest Service engages in cooperation and collaboration with other partners in the development of management strategies to maintain suitable habitat conditions and big game populations in numbers and distribution that allow for sustainable, high-quality viewing and hunting experiences on National Forest System lands.
- **FW-GOAL-WLF-ELK-04**: Educational information is available that provides public awareness of the high value of wildlife resources such as biodiversity, habitat connectivity, recreation opportunities, cultural or spiritual connections, safety issues, and co-existence.
- **FW-GOAL-WLF-ELK-05**: Elk remain on National Forest System lands throughout the archery and rifle hunting seasons at levels that support State recommendations regarding big game distribution, population size, and harvest.
- **FW-GOAL-WLF-ELK-06**: Elk forage, connectivity, winter range, and calving habitat conditions alleviate adjacent landowner conflicts and support State elk management objectives.

Glossary

ELK SECURITY - Adequate forage and hiding cover where disturbance to elk on winter range during the winter and in calving areas during the reproductive season is minimized and impeding migration corridors is avoided.

Old Growth

Current 1987 Plan Components

These components are **modified or removed** from the Bitterroot Forest Plan:

Forest-wide Desired Condition at the End of the Fifth Decade

On suitable timberland, about 81,600 acres will be seedlings and saplings, 55,900 acres poletimber, 113,100 acres immature and mature sawtimber, and 105,300 acres old growth. (Chapter 2, Section E.2.(e))

Forest-wide Management Standards

Stand conditions that qualify as old growth will vary by habitat type and landform. Current plan criteria to consider for identifying old growth include:

- large trees, generally 15 per acre greater than 20 inches diameter at breast height (dbh) for species other than lodgepole pine and 6 inches DBH for lodgepole pine; canopy closure at 75 percent of site potential;
- stand structure usually uneven-aged or multistoried;
- snags, generally 1.5 per acre greater than 6 inches DBH and 0.5 per acre greater than 20 inches;
- more than 25 tons per acre of downed material greater than 6 inches diameter;
- heart rot and broken tops in large trees are common; and
- mosses and lichens are present. (Chapter II, Section F.1(e)(2))

Old-growth stands may be logged and regenerated when other stands have achieved old-growth status. (Chapter II, Section F.2(e)(5))

Management Area Standards

Management Area 1

Old growth stands should be 40 acres and larger, distributed over the management area. About 3 percent of Management Area 1 suitable timberland, in each third order drainage will be maintained in old growth. Provide 40-acre stands of old growth by coordinating management activities in this area with activities m adjacent management areas and with intermingled riparian and unsuitable management areas (USDA, 1979). (Chapter III, Section B.3(c)(2) Suitable for timber management).

Management Area 2

Old growth stands should be 40 acres and larger, distributed over the management area. About 8 percent of the Management Area 2 suitable timberland, in each third order drainage will be maintained in old growth. Provide 40-acre stands of old growth by coordinating management activities in this area with activities in adjacent management areas and intermingled riparian and unsuitable areas (USDA, 1979). (Chapter III, Section C.3(c)(2). Big-game winter range suitable for timber production).

Management Area 3a

Old growth units should be 40 acres and larger, distributed over the management area. About 8 percent of the Management Area 3a suitable timberland in each third order drainage will be maintained in old growth. Provide 40-acre stands of old growth by coordinating management activities in this area with activities in adjacent management areas especially Management Area 3b, riparian areas

(USDA, 1979). (Chapter III, Section D.3(c)(2). Visually sensitive foreground and middleground East; suitable for timber production).

Management Area 3b

Riparian old growth should be coordinated with adjacent management area old growth to provide for adequate distribution and 40 acre or larger units.

Management Area 3c

Old growth stands should be 40 acres and larger, distributed over the management area. Over 8 percent of non-riparian suitable timberland in each separate piece of Management Area 3c will be maintained in old growth. Over 25 percent of riparian area suitable for timber production in each separate piece of Management Area 3c will be maintained in old growth. Riparian and non-riparian old growth will be coordinated to assure that old growth stands are at least 40 acres. (USDA, 1979). (Chapter III, Section F.3(c)(5). Visually sensitive foreground and middleground West; suitable for timber production).

Glossary

OLD GROWTH-A forest stand with 15 trees per acre greater than 20 inches dbh (6 inches in lodgepole pine) and canopy closure that is 75 percent of site potential. The stand is uneven-age or multistoried. There should be 1.5 snags per acre greater than 6 inches dbh; 0.5 snags per acre greater than 20 inches dbh; and 25 tons per acre of down material greater than 6 inches diameter. Heart rot and broken tops are common and mosses and lichens are present.

STAND- A community of trees or other vegetative growth occupying a specific area and sufficiently uniform in composition (species), age, spatial arrangement, and conditions as to be distinguishable from the other growth on adjoining lands, so forming a silvicultural or management entity.

Modified Amendment Components regarding Old Growth

These modified components are added to and amend the Bitterroot National Forest Plan:

Forest-wide Desired Condition

FWD-DC-VEG-01: The amount of old growth increases relative to existing condition. The location and condition of old growth is dynamic over time. Old growth stands are influenced by succession, natural disturbance regimes, and climate. Landscape level resiliency is provided by promoting a mosaic of younger forests to replace old growth when it is killed by stand-replacing events. The desired condition of old growth is described in Table 1.

Table 1. Forest-wide existing and desired conditions of old growth

Region 1 Habitat Type Groups ¹ Existing Condition (90 percent confidence interval) ²		Desired condition			
Forest-wide	9.90 percent (8%-12%)	Old growth is distributed widely across the forest, and levels vary depending on available compositions and structures, disturbance levels, and management objectives. The amount of old growth is generally similar to or greater than that of the existing condition, however the amount of old growth may be subject to the likelihood of increased extent and/or severity of natural disturbances such as insects, disease and wildfire. Old growth distribution that complements habitat connectivity is desired. Old growth is resilient to impacts that might result in the loss of old growth characteristics, such as insect infestations, wildfire, and drought. Old growth contains components that contribute to high quality habitat, including large or very large live trees with rot or broken tops, snags, downed woody material, and a diversity of tree size classes and canopy layers. A variety of old growth types are present.			
Cold	11 percent (6%-18%)	Old growth in this potential vegetation type generally consists of whitebark pine, Engelmann spruce, and subalpine fir, with stand-level resiliency and open structures desired in whitebark pine types versus spruce/fir types which may be denser and more layered.			
Cool Moist Cool Wet Cool Moderately Dry	13 percent (9%-19%)	Old growth in these potential vegetation types may be subject to wider pulses of availability, due to the preponderance of lodgepole pine and high severity low frequency disturbance regimes. Old growth includes spruce and Douglas-fir dominated stands, often with dense canopy layers, as well as even-aged lodgepole pine.			
Moderately Warm Dry Moderately Warm - Moderately Dry Moderately Warm Moist -	8 percent (5%-1%)	Old growth is dominated by ponderosa pine and Douglas-fir, often in large patches with an uneven-aged and irregular tree distribution. Stands are resilient to low severity disturbance. Other species such as juniper and aspen are valuable habitat components.			
Warm Dry -	2 percent (0%-6%)	Old growth is dominated by pure stands of large, fire-resistant ponderosa pine, in various patch sizes with an uneven-aged and irregular tree distribution. Stands are resilient to low severity disturbance.			

Old growth forests are defined specifically as forests that meet the minimum criteria established for the Northern Region of the Forest Service (see glossary)

Existing condition shown is the mean percent of old growth (see glossary) with the 90 percent confidence interval shown in parenthesis. Source is Northern Region Summary Database, Forest Inventory and Analysis data, Hybrid 2015.

Forest-wide Guidelines

FW-GDL-VEG-01: To maintain habitat connectivity and minimize disturbance of old-growth associated wildlife, road construction (permanent or temporary) or other developments should be avoided in old growth (see glossary) unless access is needed to implement vegetation management activities and purposes as outlined in FW-GDL-STD-01 and there are no feasible alternative road locations. When identifying if proposed treatment areas include old growth, use a reasonable and accurate approach based on data collection or validation. Consider delineating old growth stands based on the FSH 2409.17, or other current direction.

As stated in the existing Forest Plan, Forest-wide management direction applies to all management areas, including MA 3b (U.S. Department of Agriculture 1987c)(p. III-22).

Forest-wide Management Standard

FW-STD-VEG-01: To promote the retention of old growth (see glossary) and contribute to biodiversity, vegetation management activities in old growth should retain all old growth characteristics to ensure structure, function and process, as defined in Green et al. (2011) (Table 2) and as updated.

Vegetation management activities in old growth stands should only occur for one or both of the following purposes:

- Maintain or restore old growth habitat characteristics and ecosystem processes.
- Increase resistance and resilience to disturbances or stressors that may have negative impacts on old growth characteristics or abundance (such as drought, wildfire, and bark beetles).

Exceptions to this guideline may be allowed where needed to mitigate hazards to: (1) public safety in campgrounds, other designated recreation sites, administrative sites, and permitted special use areas; or (2) infrastructure that is essential to community welfare (e.g., utilities and communications or wildland urban interface). Regeneration harvest may occur in rare instances of severe insect and disease situations or blowdown events, where the stand is no longer functioning as old growth (Oliver and Larson 1996), as determined by a certified Silviculturist.

Table 2. Western Montana Zone (Flathead, Lolo, Bitterroot and Kootenai National Forests) old growth forest characteristics (based on Green et al., 2011, Feb. 2005 errata edit)

Old- growth forest type ^a	Habitat type group ^b	Minimum criterion: age of large trees (above minimum dbh)	Minimum criterion: number of trees per acre by dbh ^j	Minimum criterion: basal area (ft²/acre)	dbh variation ^d	Percent dead/ broken top ^c	Probability of downed woody ^d	Percent decay ^c	Number canopy layers ^e	Snags ≥ 9 inches d.b.h. ^c	Number of samples ^f	Broad Potential vegetation types ⁹
1–PP, DF, L, GF, LP	A, B	170	8 ≥ 21"	60	М	12 3-23	L-M	5 0-11	SINGLE	6 0-22	4,847	WD
2–DF, L, PP, SAF, GF	С	170	8 ≥ 21"	80	Н	11 0-21	M	5 2-12	SINGLE/ MULTIPLE	7 2-37	2,505	WD
3–LP	C, D, E, F, G, H	140	10 ≥ 13"	60/70/80 ^h	L	11 5-2	Н	6 2-15	SINGLE	19 0-92	2,648	WD, WM, CM
4-SAF, DF, GF, C, L, PP, WP, WH	D, E, F	180	10 ≥ 21"	80	Н	9 0-19	Н	9 1-31	SINGLE/ MULTIPLE	15 2-43	13,867	WM, CM
5–SAF, DF, GF, L, PP, WP, WB	G, H	180	10 ≥ 17"	70/80 ⁱ	M	9 1-18	Н	6 0-12	MULTIPLE	12 3-36	4,053	WD, CM
6SAF, WB, DF, L	I	180	10 ≥ 13"	60	М	11 2-31	М	10 2-17	MULTIPLE	25 5-38	255	СО
7–LP	I	140	30 ≥ 9"	70	L	8 3-14	Н	5 0-11	SINGLE	17 9-22	95	СО
8–SAF, WB/AL	J	180	20 ≥ 13"	80	М	12 10-14	М	5 0-8	SINGLE/ MULTIPLE	37 33-40	14	CO

a. Forest cover type species codes: PP=ponderosa pine; DF=Douglas-fir; L=western larch; GF=grand fir; LP=lodgepole pine; SAF=Engelmann spruce/subalpine fir; C=western redcedar; WP=western white pine; WH=western hemlock; WB=whitebark pine; AL=alpine larch

b. Habitat types that occur within these groups are found in Green et al. (2011).

c. These values are not minimum criteria. They are the range of means for trees ≥ 9 " dbh across plots within forests, forest types, or habitat type groups.

- d. These are not minimum criteria. They are low, moderate, and high probabilities of abundant large downed woody material or variation in diameters based on stand condition expected to occur most frequently.
- e. This is not a minimum criterion. The number of canopy layers can vary within an old-growth forest type based on age, relative abundance of different species, and successional stage.
- f. Plot data from the Northern Region stand exam inventory.
- g. Bitterroot National Forest-specific column added to Green's table to show which potential vegetation types in the forest plan apply to the old-growth forest type. WD = warm- dry; WM = warm-moist; CM = cool-moist; CO = cold
- h. In old-growth forest type 3, for basal area, 60 square feet/acre applies to habitat type group E for LP; 70 square feet/acre applies to habitat type group C for LP and habitat type group H for ES, AF, and WBP; 80 square feet/acre applies to all other habitat type and cover type combinations.
- i. In old-growth forest type 5, for basal area, 70 square feet/acre applies to habitat type group H for SAF; 80 square feet/acre applies to all other habitat type and cover type combinations
- j. To use these criteria, Basal Area and DBH must be met. For example, 8 Trees greater than or equal to 21" dbh needs to meet Basal Area requirement as well. To meet 60 BA at 21" dbh, 25 TPA are needed. 8 TPA would be met if trees were 37" dbh or greater.

Glossary

- **OLD GROWTH** -Old Forest with qualitative and quantitative characteristics varying by habitat type, as defined for Western Montana in Green et al. 1992 errata 2011. A stand is no longer old growth if mortality from disturbance reaches a level where structure, function and process now define the stand initiation phase (Oliver and Larson 1996).
- **RESILIENCE** -The capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment. In the context of ecosystems, the Forest Service defines resilience as the ability of an ecosystem and its component parts to absorb or recover from the effects of disturbances through preservation, restoration, or improvement of its essential structures and functions and redundancy of ecological patterns across the landscape (U.S. Global Change Research Program 2022).
- STAND- A community of naturally or artificially established trees of any age sufficiently uniform in composition, constitution, age, site productivity, spatial arrangement, or condition to be distinguishable from adjacent communities thereby forming a silvicultural or management entity. FSH 2409.17 SILVICULTURAL PRACTICES HANDBOOK. Five acres is the smallest practical area to manage as a stand.

Snags

Current 1987 Plan Components

This component is **removed** from the Bitterroot Forest Plan:

Forest-wide Management Standards

All snags that do not present an unacceptable safety risk will be retained. (Chapter II, Section F.1(e)(3))

Modified Amendment Components regarding Snags

These components are **added to amend** the Bitterroot National Forest Plan:

Forest-wide Desired Condition

FW-DC-VEG-02: Forest conditions support natural quantities and distributions of snags. Snags are unevenly distributed and dynamic over time, with a range of decay classes represented. The highest densities of snags occur in burned areas and in areas infested by insects; the lowest densities occur along roads, in areas where the concern for human safety is elevated, areas where there is concern for fire hazard (such as the wildland-urban interface) and in stands where active management is occurring. Individual stands may have no snags, or many, depending upon site-specific conditions. Table 3 displays the mean number of snags per acre by diameter threshold by snag analysis group found in areas of the Forest that have not had pro-active vegetation management

Table 3	*Forget wide existing	condition and	desired minimum	snags across the Forest
I able 3.	I DIEST MINE EVISITIE	Condition and	uesireu illillillillillilli	Silays acioss life i diest

Snag	Medium (>10"dbh ⁴⁾	Large (>	15"dbh ⁴⁾	Very large(>20"dbh ⁴⁾		
Analysis Group ¹	Existing Desired minimum ³				Existing Condition ²	Desired minimum ³	
Lodgepole Pine	24.7 (16-33)	11	3.4 (1-5)	2	1.1 (0.3-2)	2	
Warm/Dry	16.1 (11-20)	4	7.4 (4-10)	4	3.6 (2-5)	2	
Warm/Moist	19.7 (4-39)	4	12.4(2-24)	3	6.8(0-13)	3	
Cold, Cool/Moist	26.1 (21-31)	14	7.3 (5-9)	5	1.8 (0.9-2)	1	

¹ Snag analysis groups are from Bollenbacher (2009). See appendix C

Forest-wide Guidelines

FW-GDL-VEG-02: To maintain snags (standing dead trees) over the long term for wildlife habitat and ecosystem processes, vegetation management projects should retain at least on average:

² Existing condition is the mean snags per acre, with the 90% confidence intervals shown in parenthesis. Source is R1 Summary Database, FIA data, Hybrid 2015. (Bush and Reyes 2023).

³ Desired is derived from Bollenbacher (2009), supplemental data Harris (1999) represented by the mean number of snags found in the wilderness and roadless areas on the Bitterroot NF, Bull et al. 1997, and Brown et al. 2003.

⁴ Diameter at breast height (4.5' above the ground). The classes are not mutually exclusive; e.g. the numbers for the 10"+dbh medium class include the large/very large classes and the 15"+ dbh large class includes the very large class.

- Across the Warm Dry snag analysis group, retain an average of at least 4-6 snags per acre greater than 15" dbh
- Across the Warm Moist snag analysis group, retain an average of at least 4-6 snags per acre greater than 15" dbh
- Across the remaining snag analysis groups, retain an average of at least 8-10 largest available snags per acre

The largest snags available should always be prioritized for retention. Guideline applies as an average of treatment units across a project area and allows for variation in snag retention among treatment units with the intent of preserving the most desirable snags. Snags need not necessarily be present on every acre or in every treatment unit; they may be clumped as appropriate for the site, species, and existing snag distribution. If fewer than the minimum desired snags are present, live trees should be retained for future recruitment to meet the minimum desired snags within treatment units with a preference for the largest and most decadent trees available. Large, live replacement trees may also count toward compliance with FW-GDL-VEG-04. Trees with evidence of rot or wildlife use are preferred. Live replacement trees do not need to be retained where retention is not possible due to operational limitations associated with harvest or burning implementation. Snags should be retained greater than 150 feet away from roads in areas open for firewood collection. Exceptions to the snag retention guideline may be allowed in areas where the minimum number of snags or live replacement trees are not present prior to management activities or where needed to manage infrastructure.

FW-GDL-VEG-03: Vegetation management activities should retain snags greater than 20 inches DBH and at least the minimum number of snags and live trees (for future snags) that are displayed above in FW-GDL-VEG-02. Where snag numbers for trees greater than 20 inches DBH do not exist to meet the recommended ranges, the difference would be made up with live replacement trees for future recruitment. Exceptions occur for issues such as human safety and instances where the minimum numbers are not present prior to the management activities. Snags felled for operational safety in harvest units shall be left on site.

FW-GDL-VEG-04: Where vegetation management activities occur and snags (or live trees for future snags) are retained, the following direction should be followed:

Group snags where possible, such that in some areas the density of snags >20" dbh may reach 5-10 snags/ac

Retain snags far enough away from roads or other areas open to public access to reduce the potential for removal (generally more than 150 feet);

Emphasize retention of the largest snags and live trees as well as those species that tend to be the most persistent, such as ponderosa pine, western larch, and Douglas-fir;

Favor snags or live trees with existing cavities or evidence of use by woodpeckers or other wildlife.

FW-GDL-VEG-05: Where fuel models allow, girdle large trees with dwarf mistletoe to maintain large snag structure, rather than felling them during sanitation treatments.

Forest-wide Management Standard

FW-STD-VEG-02: Whitebark pine shall not be authorized for firewood collection.

Management Area 3b – Riparian Areas Standard

MA3b-STD-VEG-01: Snags that do not present an unacceptable safety risk will be retained. Snags may be managed for the benefit of riparian ecosystem process including fish, wildlife, and botany purposes.

Coarse Woody Debris

Current 1987 Plan Components

These components are **modified or removed** from the Bitterroot Forest Plan:

Management Area Standards

Management Areas 1, 2, 3a, 3c

On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a &1981b; Harvey, 1982) (Chapter III, Section B.3(f)(4); Section C.3(f)(3); Section D.3(f)(4); Section F.3(f)(4)).

Management Area 2

About 25 tons/acre of down trees larger than 6-inch diameter will be left for nongame habitat if available (Chapter III, Section C.3(j)(2)).

Management Area 3b

About 25 tons/acre of dead and down trees greater than 6 inches in diameter should be left, where available, to provide habitat for nongame and small game wildlife (Chapter III, Section E.3(j)(4)).

Modified Amendment Components regarding Coarse Woody Debris

These components are added to amend the Bitterroot National Forest Plan:

Forest-wide Desired Conditions

- **FW-DC-VEG-03**: Downed wood occurs throughout the forest in various amounts, sizes, species, and stages of decay. The larger down wood (i.e., coarse woody debris) provides habitat for wildlife species and other organisms, as well as serving important functions for soil productivity.
- **FW-DC-SOIL-01**: Soil organic matter, physical conditions, and down woody debris maintain soil productivity and hydrologic function. Physical, biological, and chemical properties of soil are within the recommended levels by soil type as described in the Bitterroot National Forest soil inventory. These soil properties enhance nutrient cycling; maintain the role of carbon storage, and support soil microbial and biochemical processes.
- **FW-DC-SOIL-02**: Soil organic matter and downed woody debris support healthy mycorrhizal populations, protect soil from erosion due to surface runoff, and retain soil moisture.

Table 4. Recommended ranges of tons/acre of Coarse Woody Debris to Retain after Vegetation Management Activities for each Fire Group. *

Fire Groups	Recommended Coarse Woody Debris Ranges (tons/acre)
Scree, Rock, Meadows, Grasslands	0-5
1, 2, 4 =Warm, Dry Ponderosa Pine; Warm Dry Douglas-fir	5-10
5, 6 = Cool, Dry Douglas-fir; Moist Douglas-fir	10-20
7, 8, 9, 10 =Cool lodgepole; Dry Lower Subalpine Fir; Moist Lower Subalpine Fir; Cold, Moist Upper Subalpine and Timberline	8-24
11=Warm Moist Grand Fir, Western Redcedar, and Western Hemlock	20-30

^{*}Based on Brown and Smith 2000, Graham et al. 1994, and Fischer and Bradley 1987

Forest-wide Guideline

FW-GDL-VEG-06: To support ecosystem function and habitat, vegetation management activities should retain the amounts of coarse woody debris (including logs) that are displayed in Table 4. A variety of species, sizes, and decay stages should be retained, with emphasis on largest diameter coarse woody debris available. Exceptions may be allowed where there is elevated concern for fire risk or minimum quantities are not available.

Glossary

- **COARSE WOODY DEBRIS** Wood material comprised of the downed tree trunks and large branches that are greater than 3 inches diameter on the small end for at least six feet in length. Also referred to as 1000-hour fuels.
- **DUFF-** A highly decomposed transitional soil layer formed in forested soils between partially decomposed forest liter at the surface and underlying mineral soil.
- **ECTOMYCORRHIZAE** A specific type of fungi that form symbiotic relationships with many tree and shrub species by enveloping the surface of roots in a mantle which increases the ability of the host plant to obtain water and nutrients from the soil. Ectomycorrhizae are especially critical to the sustainability of conifer forests during drought conditions and on infertile soils.

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