ENVIRONMENTAL ASSESSMENT
Haacke-Claremont Vegetation Management Project

DECISION NOTICE AND FINDING OF NO SIGNIFICANT IMPACT

Bitterroot National Forest
Stevensville Ranger District
Ravalli County, Montana

March 2008

Lead Agency: USDA Forest Service

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DECISION NOTICE

DECISION AND REASONS FOR THE DECISION

The Haacke-Claremont Vegetation Management Project involves treating fuels and harvesting timber using a combination of commercial and non-commercial tree thinning and prescribed fire. The project area is located in Haacke and Claremont Creek watersheds in the Sapphire Mountains, east of Stevensville, Montana in T.9 N., R.18 W. Section 32 and T.8 N., R.18 W. Sections 4 - 6, 8, 9 and 17. The project area is within the Stevensville Ranger District, Bitterroot National Forest, Montana. The purpose and need for this project (described in detail in the EA beginning on page 11) is to:

1. Reduce fuel loading throughout Haacke and Claremont Creeks, especially along the National Forest and private land boundary
2. Reduce tree densities in both young, regenerated timber stands and mature stands to improve forest growth, and
3. Provide forest products, jobs, and income to the local economy.

These actions are needed because forest lands in Haacke and Claremont Creeks are comprised of dense stands of ponderosa pine, Douglas-fir, and lodgepole pine with an unacceptable risk of high severity wildland fire, and high susceptibility to tree mortality by fire, root disease, or insects.

A fire in these drainages could burn over a substantial portion of each drainage. Fuel reduction treatments such as tree thinning and prescribed fire would help to modify extreme fire behavior, lessen the severity of a wildland fire, and provide a better chance of controlling or extinguishing the fire before it develops into a high intensity fire with undesirable effects on soils, water, and wildlife habitat.

The high number of trees per acre in these timber stands create competitive stress between trees as they compete for growing space, water, nutrients, and sunlight. Competitive stress and poor tree vigor provides opportunity for root disease to become established and spread, and for insects such as Douglas-fir beetle and mountain pine beetle to expand their populations beyond endemic levels. This disease and insect caused mortality adds to the fuel load and makes fire suppression activities more difficult. Tree thinning reduces the competitive stress on trees by providing them more growing space and reducing the competition for water, nutrients, and sunlight. The reduced stress, in turn, improves the growth of individual trees and creates forests that are more

resilient to disturbance such as root disease, insects, or low severity fire.

This project would offer timber for sale and provide wood products, jobs, and income to the local economy. Haacke and Claremont Creeks have a history of timber management that will be continued with the implementation of this project. Treating these stands, improving forest growth, and reducing the risk of tree mortality from fire, insects, or diseases will help provide options for additional wood products in the future.

These actions respond to the goals and objectives outlined in the Bitterroot Forest Plan (1987) and helps move the project area towards desired conditions described in that plan. The Haacke-Claremont project is within Management Area 1 (93 acres), Management Area 2 (889 acres) and Management Area 3a (2,149 acres). The following Forest Plan goals and objectives (Chapter II & Appendix M of the Forest Plan) apply to the Haacke-Claremont project:

- Provide sawtimber and other wood products to help sustain a viable local economy
- Provide an economically efficient timber sale program
- Maintain forest stands so that pest caused losses are reduced to acceptable levels
- Convert high-risk or insect and disease infested stands to young, healthy stands
- Design fire management programs that are consistent with other resource goals
- Prescribe fire to maintain healthy, dynamic ecosystems that meet land management objectives.
- Emphasize fire ecology implications when applying prescribed fire. Integrate an understanding of the role that fire plays in regulating stand structure into the development of silvicultural prescriptions.
- Coordinate with state Air Quality Bureaus to prevent significant deterioration of air quality.
- Fire pre-suppression programs are cost-effective and responsive to the Forest Plan

The Burnt Fork Ecosystem Analysis at the Watershed Scale provides reference conditions and recommendations for the Burnt Fork Watershed, including the Haacke and Claremont drainages (Bitterroot North Zone Interdisciplinary Team. 2004 (PF#K-Silv10)).

I considered the following decision criteria in arriving at a decision on the Haacke-Claremont Vegetation Management project:

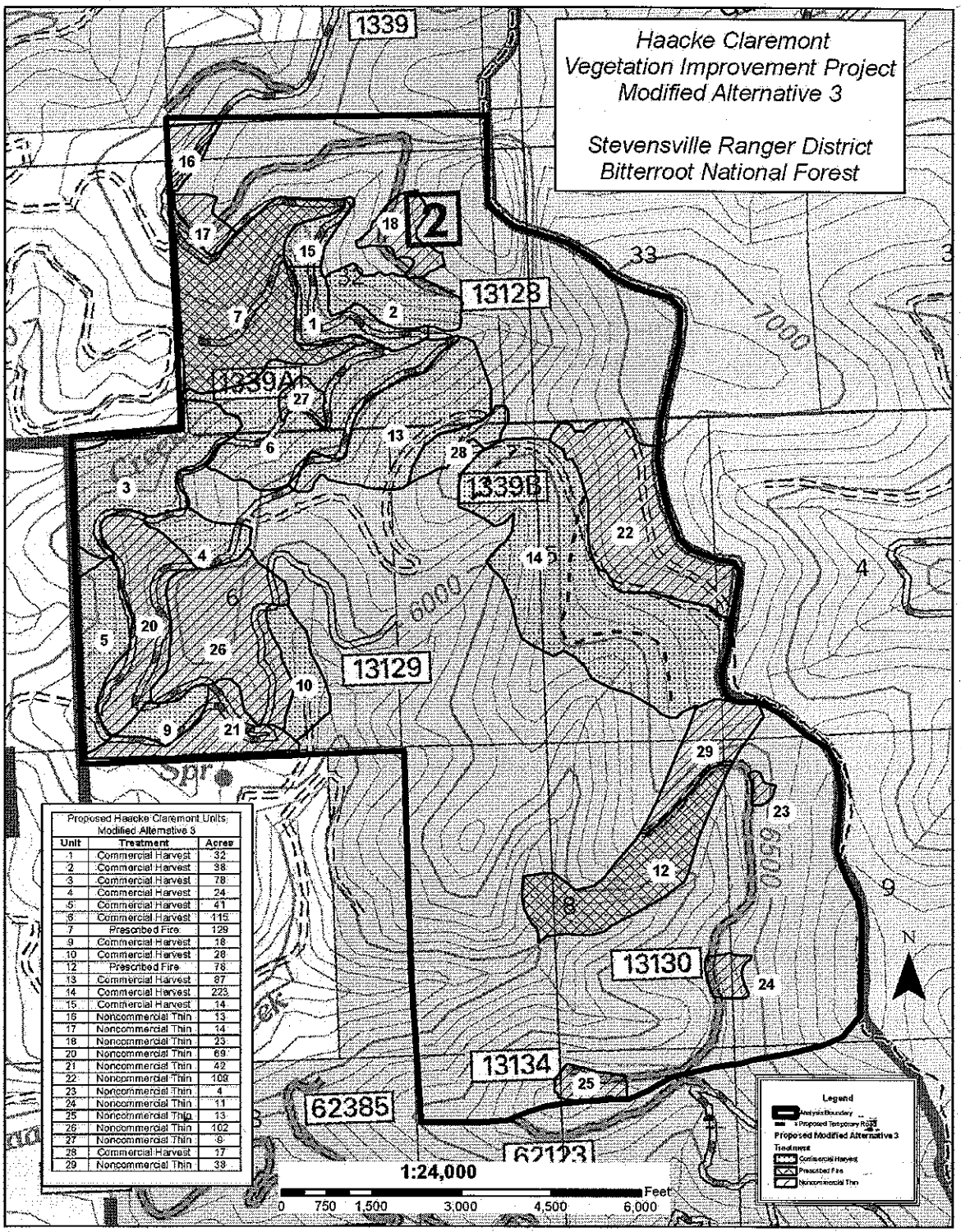
1. How well did each alternative meet the purpose and need for action?
2. How did the alternatives address the environmental issues, including those raised through internal and public comments?

DECISION

After careful review of the Environmental Assessment (EA) for the Haacke-Claremont Vegetation Management Project and the comments received during the comment period, I have decided to select a Modified Alternative 3 that includes the following activities:

Proposed Activities	**Alternative 3 Modified**
Commercial forest thinning of predominantly ponderosa pine and Douglas-fir stands using tractor or skyline harvesting followed by hand piling, pile burning, and underburning (acres)	715
Non-commercial thinning of young forest stands followed by hand piling, pile burning, and underburning (acres)	447
Prescribed burning, with limited slashing of small trees (≤ 10" dbh) (acres)	207
Road Construction (miles) Temporary Road Construction (miles) Temporary Road Reconstruction (miles)	0 1.2 0.11

Modified Alternative 3 drops 20 acres from units 14 and 28, and 74 acres from unit 12. Total acres treated are less than Alternative 2 or 3 as described in the EA. Upon discussion with the ID Team, I discovered that the area identified as thermal cover also had some logging system difficulties and it was my decision that it would be best to retain this portion of these units untreated. Dropping the thermal cover treatment also addresses comments received on the EA (PF#G-comments2.) A Forest Plan Amendment for thermal cover is no longer needed. Unit 12 is a prescribed fire unit. A small area of old growth is situated near the bottom of this unit alongside the private property. To protect this area from prescribed fire, the western boundary needed to be moved to a geographic location where the fire could be easily contained. Modified Alternative 3 moves the boundary of unit 12 to the stream channel east of the private property line.



Proposed Haacke Claremont Units: Modified Alternative 3

Unit	Treatment	Acres
1	Commercial Harvest	32
2	Commercial Harvest	38
3	Commercial Harvest	78
4	Commercial Harvest	24
5	Commercial Harvest	41
6	Commercial Harvest	115
7	Prescribed Fire	129
9	Commercial Harvest	18
10	Commercial Harvest	28
12	Prescribed Fire	78
13	Commercial Harvest	87
14	Commercial Harvest	223
15	Commercial Harvest	14
16	Noncommercial Thin	13
17	Noncommercial Thin	14
18	Noncommercial Thin	23
20	Noncommercial Thin	69
21	Noncommercial Thin	42
22	Noncommercial Thin	109
23	Noncommercial Thin	4
24	Noncommercial Thin	11
25	Noncommercial Thin	13
26	Noncommercial Thin	102
27	Noncommercial Thin	6
28	Commercial Harvest	17
29	Noncommercial Thin	38

Modified Alternative 3

- 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.

The environmental effects of Modified Alternative 3 are very similar to the effects described in the EA's Chapter 3 Environmental Consequences section for Alternative 3.

Compared to Alternative 3, the environmental effects of this modification are:

- Fuel reduction would occur on 94 fewer acres
- Future forest growth would be reduced very slightly
- Approximately 60 MBF would not be available for sale
- Thermal cover in winter range would be maintained at 3% and no Forest Plan Amendment for thermal cover is required
- Slight reduction in acres with soil disturbance
- Slightly fewer disturbed acres where invasive weeds could spread
- No change in effects to fisheries
- No change in effect to water
- No change in effects to recreation

REASONS FOR THE DECISION

My decision was based on the environmental analysis conducted by an Interdisciplinary (ID) Team consisting of a hydrologist, fisheries biologist, soil scientist, wildlife biologist, silviculturist, recreation specialist, botanist, heritage resource specialist, timber operations specialists, transportation engineer, ID team leader, and Forest NEPA specialist. My decision was based on the decision criteria described below:

I. How well does the selected alternative meet the purpose and need for action?

1. Reduce fuel loading throughout Haacke and Claremont Creeks, especially along the National Forest and private land boundary.

- The combination of mechanical treatments together with prescribed fire will reduce the amount of surface fuels, increase the height to live crown, decrease crown density, and retain the largest trees.
- Canopy continuity will be reduced in the treated areas and result in a mosaic of forest and fuel conditions across the project area.
- Generally, treated stands have lower fireline intensities than untreated stands, allowing for increased fire suppression capability and greater firefighter safety.

- Treating these stands should reduce the potential for extreme fire behavior and create conditions more favorable for the reintroduction of prescribed fire consistent with historic disturbance regimes.
- Prescribed fire under conditions suitable for good air dispersal allows the reintroduction of fire while still meeting the Montana Idaho air quality standards.
- Provides a better balance between resource needs and fuel management objectives. Compared to Alternatives 2 and 3, Modified Alternative 3 reduces the total number of acres that will be precribed burned but allows for the retention of thermal cover and better protection of an existing old growth stand.

2. Reduce tree densities in both young, regenerated timber stands and mature stands to improve forest growth

   - Implementation of this project would alter forest conditions by reducing the density of trees and creating scattered openings.
   - The mix of tree species would be altered with a greater percentage of ponderosa pine and western larch and less Douglas-fir and subalpine fir.
   - Changes in tree species, size and density would be more similar to what historically existed, would allow for increased tree growth and vigor, and would be more resilient to disturbance.
   - Prescribed fire would change the composition and vigor of understory species and favor species better adapted to fire.
   - Since Modified Alternative 3 thins more acres than Alternative 2, more acres would meet the desired vegetation conditions. Compared to Alternative 3, Modified Alternative 3 commercially thins fewer acres but it provides a better balance between resource needs and timber management objectives by retaining thermal cover.

3. Provide forest products, jobs, and income to the local economy.

   - Estimated timber volume from Modified Alternative 3 is between 2.5 to 4 Million Board Feet.
   - Modified Alternative 3 commercially harvests more acres than Alternative 2 but fewer acres than Alternative 3. I believe Modified

Alternative 3 provides a better balance between resource needs and timber management objectives by retaining thermal cover.

II. How did the selected alternative address the environmental issues? The significant environmental issues influencing the selected alternative are: roads, wildlife habitat and fuels. The following considerations help explain how my decision is responsive to these environmental issues:

Roads – *whether or not more roads (permanent or temporary) should be constructed*

- Approximately 1.3 miles of temporary road would be constructed or reconstructed with Modified Alternative 3. Soil and ground cover would be disturbed over about 4-5 acres. The upland location would not threaten water resources and full re-contouring after use would prevent long-term detrimental effects to watershed, wildlife, fisheries, and soils (EA pages 96,150,169,172,176, 191).

- No new permanent roads or crossings are proposed, helping to minimize road system effects. The project is consistent with Montana Impaired Waters (303(d)) programs and overall, the limited water resources in the Haacke-Claremont analysis area are in good condition.

- Ground disturbance associated with temporary road construction will increase the risk of weed spread. The temporary road will be rehabilitated after use in order to prevent the introduction and/or spread of invasive plants.

- Road closures or restrictions were not considered in this project because motorized, dispersed recreation is an important goal of the Forest Plan in this area and the existing roads do not appear to be adversely affecting watershed conditions (EA pages 192 – 195). Motorized recreation planning is currently ongoing on a Forest-wide basis, and any potential travel or access changes would be discussed and analyzed in that project.

Wildlife Habitat – *what degree management actions will adversely affect habitat for the wildlife species present in the project area*

The following wildlife species are present or have suitable habitat in the project area. The effects of Modified Alernartive 3 on these species are the same as Alternative 3, discussed in the EA. The Biological Assessment and Biological Evaluation completed for this project determined the following:

Threatened & Endagered Specis	Gray Wolves (Experimental Nonessential Species)	Not likely to Jeopordize the Continued Existence of the Species or Result in the Destruction or Adverse Modification of Proposed Critical Habitat
	Bull trout	No Effect
Forest Service Sensitive Species	Black-backed woodpeckers, flammulated owls, northern goshawks, Townsend's big-eared bats, westslope cutthroat trout	May impact individuals or their habitat but would not likely contribute to a trend towards Federal listing of loss of viability to populations or species
Management Indicator Species (MIS)	elk, pileated woodpeckers, and pine marten.	May impact individuals or their habitat but would not likely contribute to a trend towards Federal listing of loss of viability to populations or species

- No old growth habitat would be treated with Modified Alternative 3. This alternative would help move treated stands towards mature or old growth conditions by reducing the risk of stand-replacing fire and increasing individual tree growth.

Fuels – *the public issue was whether or not the proposed stand treatments would positively affect fire behavior*

- In addition to the discussion above on how well Modified Alternative 3 meets the purpose and need for fuels reduction, I believe that Alternatives 2, 3 and Modified Alternative 3 all meet the criteria for an effective fuel reduction project as described in the literature (Agee and Skinner 2005, Agee et al 2000). The proposed thinning treatments will increase canopy base heights, reduce crown density, and retain larger

fire resistant trees. The commercial harvest treatments will reduce surface fuels by whole tree yarding (including branchwood and foliage) that will be treated at the landing or removed for biomass utilization. Harvesting will be followed with prescribed fire and noncommercial thinning units will include fuel reduction activities such as piling and burning.

- Modified Alternative 3 provides a better balance between resource needs and fuel management objectives compared to Alternatives 2 and 3. Fuel reduction occurs in conjunction with retention of thermal cover and better protection of old growth.

Modified Alternative 3 is very similar to Alternative 3 discussed in the EA. The EA describes effects on vegetation, fuel and fire management, wildlife, plant species of concern, invasive plants, fish and aquatic habitat, water, soils, heritage resources and recreation. Opening forest stands and the use of equipment will increase the risk of weed spread and result in possible illegal OHV use where it does not exist now. However, the trade off with implementing the proposed project is that by reducing fuels and burning under controlled conditions the risk of a potentially severe natural fire during the drier months would be reduced. Compared to Modified Alternative 3, a severe natural fire would likely result in greater weed spread, more open forest conditions with greater potential for illegal OHV use, and more detrimental watershed effects.

OTHER ALTERNATIVES CONSIDERED

A complete description of the alternatives considered in detail can be found in the EA starting on page 16.

Alternative 1 (No Action). Under this alternative, no actions were proposed. No fuels or vegetation management activities would be implemented at this time to accomplish project goals or move the project area towards desired conditions. Activities authorized by previous decisions and included in active contracts would continue to completion. Routine road maintenance activities such as surface grading, culvert cleaning, or road side brushing would continue as needed to keep the roads in usable and safe condition. Recreational activities currently enjoyed by the public would continue.

Changes in forest composition, stand density, and vegetation structure would continue to occur affecting tree vigor and growth, fuel composition, the ability to introduce prescribed fire, and the ability to effectively suppress unwanted wilfire. Dense multi-storied stands are susceptible to and capable of supporting populations of western spruce budworm and infection by dwarf

mistletoe. Decadent lodgepole pine stands will experience increased bark beetle mortality. This increased mortality, decadence, high stand density, and presence of ladder fuels will be accompanied by a corresponding dense and continuous fuel load. The potential for a large and/or uncharacteristicly intense wildfire will still exist.

Refer to map of Alernative 1 in EA page 17.

I did not choose this alternative because it does not meet the purpose and need for the project

Alternative 2, developed as the Proposed Action, would meet the purpose and need for action by accomplishing the following management activities:

- Commercial forest thinning of predominantly ponderosa pine and Douglas-fir stands using tractor or skyline harvesting (approximately 671 acres) followed by hand piling, pile burning, and underburning. 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.

- Non-commercial thinning of young forest stands (approximately 447 acres) followed by hand piling, pile burning, and underburning.

- Prescribed burning, with limited slashing of small trees (≤ 10" dbh) (approximately 281 acres)

- No new permanent or temporary road construction. No changes in travel management status.

- 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.

- Hauling of logs would occur within the project area, down Forest Road 428 (Ambrose Creek Road) to County Road 1100.

- A site-specific Forest Plan Amendment, as described above in the decision, would adjust elk habitat effectiveness standards in the Forest Plan (standard #14 on page II-21) to current levels in the Haacke-Claremont project area.

- A site-specific Forest Plan Amendment, as described above in the decision, would adjust coarse woody material standards in the Forest Plan.

- A site specific Forest Plan Amendment would adjust winter range thermal cover standards in the Forest Plan to read: *"Existing thermal cover will be maintained within the Haacke-Claremont treatment units to the extent it does not conflict with meeting the project's objectives."*

Refer to map of Alernative 2 in EA page 20.

I did not choose this alternative because of information I received from the ID Team and review of the comments. I chose to drop 20 acres from units 13 and 28, and 74 acres from unit 12. Because of these changes, I chose instead to modify alternative 3 and include the additional acres in unit 14 which are not included in Alternative 2.

Alternative 3 was designed to meet the purpose and need for the project and included additional treatment acres compared to alternative 2. To access these additional acres a temporary road would need to be constructed. The following management activities are part of Alternative 3:

- Commercial forest thinning of predominantly ponderosa pine and Douglas-fir stands using tractor or skyline harvesting (approximately 735 acres) followed by hand piling, pile burning, and underburning. 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.

- Non-commercial thinning of young forest stands (approximately 447 acres) followed by hand piling, pile burning, and underburning.

- Prescribed burning, with limited slashing of small trees (≤ 10" dbh) (approximately 281 acres)

- 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.

- Hauling of logs would occur within the project area, down Forest Road 428 (Ambrose Creek Road) to County Road 1100.

- A site-specific Forest Plan Amendment, as described above in the decision, would adjust elk habitat effectiveness standards in the Forest Plan (standard #14 on page II-21) to current levels in the Haacke-Claremont project area.

- A site-specific Forest Plan Amendment, as described above in the decision, would adjust coarse woody material standards in the Forest Plan.

- A site specific Forest Plan Amendment would adjust winter range thermal cover standards in the Forest Plan to read: "Existing thermal cover will be maintained within the Haacke-Claremont treatment units to the extent it does not conflict with meeting the project's objectives."

Refer to map of Alernative 3 in EA page 24.

I did not choose this alternative because of information I received from the ID Team and review of the comments. I chose instead to modify this alternative by dropping 20 acres from units 13 and 28, and 74 acres from unit 12. Dropping these acres eliminated the need for a Forest Plan Amendment for thermal cover and in unit 12 created a more logical boundary that would ensure protection of a small area of old growth alongside the private property boundary.

ALTERNATIVES NOT CONSIDERED IN DETAIL: The ID Team examined several different options for treatment and possible alternatives to the three alternatives that were fully analyzed in the EA. These options and/or alternatives that were considered but not analyzed in detail are included in this document as Appendix B.

PUBLIC INVOLVEMENT:

The Haacke-Claremont Vegetation Management Project was first listed in the Bitterroot National Forest Quarterly NEPA Schedule of Projects in April 2006. This Quarterly Schedule is mailed to several organizations, individuals, state and federal agencies and is available on the internet at http://www.fs.fed.us/sopa .

A letter describing the Haacke-Claremont Vegetation Management Project proposal and requesting comments was sent out to 41 individuals and organizations during scoping in the summer of 2007. A news release was published in the Bitterroot Star on August 22, 2007 and a legal advertisement was published in the Ravalli Republic on August 15, 2007. Four letters and two phone calls were received as comments. Four of these comments fully supported the project; one acknowledged the project but provided no comment.

Three of the letters provided information or requested that the EA address certain resource concerns. The project file (PF#E- Scoping Responses2 & 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 amendmnts 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.

FINDING OF NO SIGNIFICANT IMPACT (FONSI):

I have reviewed the direct, indirect, and cumulative impacts of these actions as documented in this Decision Notice, the Environmental Assessment, and Project File. The setting of this proposal is in a localized area. I have considered the action's impacts on the ecosystem, local communities, and county. The project does not have any large or lasting effect on society as a whole, the nation, or the state. Based on this review, I have determined there are no significant impacts on the physical, biological, or social portions of the human environment. This decision is consistent with the management direction, standards, and guidelines outlined in the 1987 Bitterroot Forest Plan, as amended.

Provisions of 40 CFR 1508.27 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 (EIS) for this project. My rationale includes:

I. **Context:** The effects of the proposed project are localized, with implications for only the area immediately surrounding Haacke Creek and Claremont Creek. Cumulative effects of past management, combined with the current proposal, and reasonably foreseeable future actions are displayed in the Haacke-Claremont Vegetation Management Project EA and the project file for each resource. These effects were considered in my determination. Modified Alternative 3, the selected alternative, is consistent with the goals and objectives outlined in the Bitterroot Forest Plan, Final EIS, and Record of Decision, as amended.

II. Intensity: This refers to the severity of impact.

1. **My finding of no significant environmenal effects is not biased by the beneficial effects of the action.** I considered both beneficial and adverse impacts associated with the alternatives as presented in Chapter III of the EA and in the project file. These impacts are within the range of effects identified in the Forest Plan. Selection of any alternative, including the No Action Alternative, will result in change and loss of some type of wildlife habitat. Potentially negative impacts include the risk of spreading invasive species, and the increased ability for illegal offroad access where stands are more open. I believe that these adverse effects are outweighed by the benefits of fuel reduction, increased fire suppression ability, forest management, and the opportunity to provide forest products. I conclude that the specific and cumulative adverse effects of the selected alternative are not significant.

2. **I have concluded that there will be no significant effects on public health and safety.** One of the reasons for implementing this project is to reduce risks posed by forest fires to public and firefighter health and safety. Similar actions on the Forest have not significantly affected public health and safety. Traffic on forest roads will increase for a short period of time during project implementation. A minor impact for a short period may also occur to local air quality from the prescribed burning. However, burning would be done in accordance to State air quality standards and within burning periods approved by the State of Montana (EA pages 59 - 60). Prescribed burning can present a risk of escaped fire but extensive agency experience with similar local projects and conditions show these risks are low. The water analysis indicates no degradation of water quality which would constitute a public health threat (EA pages 194 -195).

3. **I have concluded that my decision will have no significant effects on unique resource characteristics of the geographic area** including historic or cultural resources, park lands, prime farms, wetlands, wild and scenic rivers, or ecologically critical areas. The cultural resource analysis (EA pages 179-181, and PF#K-Heritage3). identified five historic sites, three of which will require mitigation to protect from damage. Additional mitigation for cultural resources was added since publication of the EA and is included in Appendix A of this document. While all water resources in the analysis area watersheds are important, none are considered unique for the area (EA page 185) and no wetlands would be disturbed or affected by the proposed activities (EA page 190). INFISH RHCA guidelines are included as part of the project design to protect all streams and wetlands (EA page 139). The project area does not contain any parkland, prime farmlands, wild and scenic rivers, or other ecologically critical areas. There will be no direct effect on wilderness characteristics since no activities are proposed near the Wilderness.

4. **I have concluded that the effects on the quality of the human environment are not likely to be highly controversial.** An analysis of the proposed action and alternatives has been conducted using the best information available and the latest methods of analyzing data by professionals in their respective disciplines. The effects of the proposed alternatives on the various resources (EA, Chapter 3) are not considered to be highly controversial by professionals, specialists and scientists from associated fields of forestry, fire management, wildlife biology and management, fisheries, and hydrology. The analysis did not indicate any highly controversial issues although one of the comments received disputed the science used to support the fuel and fire reduction effects analysis. The project analysis included a review

of recent literature on fire and fuel management and I believe that the science supporting this decision is straightforward and defensible.

5. **It is my conclusion that there are no unique or unusual characteristics in the area or project that have not been previously encountered or that would constitute an unknown risk to the human environment.** The Forest has considerable experience with the types of activities to be implemented. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk. The analysis considered the effects of past actions as a frame of reference in conjunction with Forest Plan monitoring. The technical analyses conducted for determinations of the impacts to the resources are supportable with use of accepted techniques, reliable data, and best available science.

6. **I have determined that the action is not likely to establish a precedent for future actions with significant effects**, because the proposed management practices are consistent with the Bitterroot Forest Plan and similar in nature to many other projects implemented on the Forest in the past decade. This action does not represent a decision in principle about a future consideration.

7. **I have determined that the effects of implementing Modified Alternative 3 combined with the effects of past, other present, and reasonably foreseeable actions will not have any significant cumulative effects.** No actions individually insignificant but cumulatively significant were identified during project analysis. The resource analysis for this project considered all connected and cumulative actions in the scope of the analysis. The cumulative effects of past, present, and reasonably foreseeable actions are considered and disclosed in each resource section in the EA, Chapter 3.

8. **I have determined that Modified Alternative 3 will have no significant adverse effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places and the action will not cause the loss or destruction of significant scientific, cultural, or historical resources.** The heritage resource analysis indicates there are five cultural resource sites inside the project area and that three of these sites have the potential to be impacted (EA pages 179-181, and PF#K-Heritage3). Mitigation measures to protect these sites are required and listed in Appendix A of this document. Compliance with Section 106 of the national Historic Preservation Act has been fulfilled by the submission of a complete cultural resource inventory report, and SHPO concurrence with its recommendations was received March 25,

2008. Consultation with the Confederated Salish and Kootenai Tribal Preservation Office was completed on March 19, 2008. There are no tribal cultural concerns associated with this project.

9. **I have determined that the action will not adversely affect any endangered or threatened species (TES) or habitat that has been determined to be critical under the Endangered Species act of 1973**. In accordance with section 7(c) of the Endangered Species Act, the Fish and Wildlife Service has determined that the following TES species may be present of the Bitterroot National Forest: bull trout, gray wolf, and yellow-billed cuckoo. Yellow billed cuckoos, or their habitat, are not present in the project area. Completed Biological Assessments for gray wolf determined that implementation of this project would *Not likely to Jeopordize the Continued Existence of the Species or Result in the Destruction or Adverse Modification of Proposed Critical Habitat.* The determination for bull trout was *No Effect.*

   In addition to addressing TES species, Biological Evaluations for sensitive wildlife, fish, and plant species, which could be affected by the proposed project were prepared and the results displayed in the EA on pages 61 and 129.

10. **I have determined that the action will not violate Federal, State, and local laws or requirements for the protection of the environment.** Applicable laws and regulations were considered in the EA (pages 47 – 49, 59 – 60, 63, 131, 136, 138, 153, 174177, 182, 196, 198) and the action is consistent with the Bitterroot Land and Resource Management Plan

Based on the context and intensity of the project as discussed in the items above, I conclude there will be no significant direct, indirect, or cumulative impacts from implementing the Haacke-Claremont Vegetation Management Project as described for Modified Alternative 3.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

I have reviewed this decision for compliance with laws, regulations, and policies. My decision to implement Modified Alternative 3 is consistent with all laws, regulations, and policies.

- **National Environmental Policy Act (NEPA):** My decision is in full compliance with NEPA. The EA analyzes a reasonable and acceptable range of alternatives, including a "no action" alternative. It also discloses the expected impacts of each alternative and discusses the identified issues and concerns. This document describes the decision I have made and my rationale for making the decision.

- **National Forest Management Act (16 U.S.C. 1600 et seq.) and consistency with the Forest Plan:** The National Forest Management Act (NFMA) and accompanying regulations require several specific findings be documented at the project level. I reviewed Modified Alternative 3 and found the following

  Consistency with the Forest Plan (16 U.S.C. 1604(i)): The Bitterroot Forest Plan establishes management direction for the Bitterroot National Forest. This direction is described in forest-wide and management area specific standards. Designing and implementing projects consistent with this direction is the means to move the Forest towards the desired future condition as described in Chapter II of the Forest Plan. Management area and Forest-wide direction established sideboards for the development of alternatives to the proposed action while responding to public issues. After reviewing the EA, I find that this decision is consistent with the Forest Plan standards, goals, and objectives as amended.

  Section 1926.5 of the Forest Service Directives provides guidance for determining the need for and documentation needed for a Forest Plan Amendment. This decision complies with that direction and the amendments included in this decision are not significant and have been incorporated into several other recent project decisions of the Forest.

  This project meets site specific management requirements for suitability for timber harvest, clearcutting and even-aged management, vegetation manipulation as per 36 CFR 219.27(b) as described in the EA pages 47 – 49 for silviculture, pages 159 – 174 for soils, pages 188 – 195 for water, and other sections of the EA.

  1. Suitability for Timber Harvest: Stands proposed for harvest treatment in Haacke-Claremont were found to be suitable for timber management in accordance with 36 CFR 219.12(a) (2)(D)(ii).

2. Clearcutting and Even-aged Management: Openings, ranging in size from less than one acre up to 12 acres, will be created where decadent lodgepole exists and where thinning, or other silvicultural treatments, would be ineffective. Creating openings (small clearcuts, seed tree, and/or shelterwood cuts) are the optimum method for treating these areas, and meet both the purpose and need of this project and Forest Plan goals (16 U.S.C. 1604 (g)(3)(F)(i)).

3. Vegetative Manipulation:

- All proposed treatments meet a portion of the goals and objectives in the Bitterroot Forest Plan for Management Areas for Management Areas 1, 2, 3a.

- Openings created with this project are in lodgepole pine where an abundance of natural regeneration is anticipated. There is assurance that these openings can be adequately restocked within five years.

- The harvesting systems utilized in this project were selected based on site specific resource needs and not selected primarily to give the greatest dollar return or the greatest output of timber.

- Silvicultural prescriptions considered the effects on residual trees and adjacent stands.

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

- Propose treatments will not permanently impair site productivity and will ensure conservation of soil and water resources.

- Management prescriptions shall be practical in terms of transportation and harvesting requirements, and total cost of preparing, logging, and administration.

- **Endangered Species Act:** This project is in full compliance with the Endangered Species Act. In accordance with Section 7(c) of the Endangered Species Act, as amended, the Bitterroot Forest prepared Biological Assessments addressing potential impacts to federally listed wildlife and fish species ((PF#J-Wildlife2, Fish2), EA pages 61, 64,-66, 151). The Fish and Wildlife Service has determined that the following TES species may be present of the Bitterroot National Forest: bull trout, gray wolf, and yellow-billed cuckoo.

- Yellow billed cuckoos, or their habitat, are not present in the project area.
- Completed Biological Assessments for gray wolf determined that implementation of this project would *Not likely to Jeopordize the Continued Existence of the Species or Result in the Destruction or Adverse Modification of Proposed Critical Habitat.*
- The determination for bull trout was *No Effect.*

Written concurrence from the USFWS was not required. There are no federally listed plant species that would be affected (EA on page 129 - 130). In addition to addressing TES species, Biological Evaluations for sensitive wildlife, fish, and plant species, which could be affected by the proposed project were prepared and the results displayed in the EA on pages 61 and 129.

- **Clean Water Act and Montana State Water Quality Standards.** Upon review of the Haacke-Claremont EA (EA, Chapters 2 and 3 and Appendix A), I find that activities associated with the Modified Alternative 3 will comply with state water quality standards and that this project is consistent with Montana Impaired Waters (303(d)) programs. Overall the water resources in Haacke-Claremont are in good condition (EA, p.188). The project utilizes pertinent BMPs (EA, Appendix A), avoids harvest in riparian areas, creates no new road/stream crossings, and utilizes harvest systems and methods that should make it very unlikely to produce even minor amounts of sediment into the Haacke-Claremont watersheds (EA p.191).

  There is potential for a relatively small sediment increase in Ambrose Creek from hauling logs on Ambrose Creek Road. Ambrose Creek is listed on MTDEQ 303(d) list for nutrients and physical habitat alterations but not for sediment (EA, p. 193 – 194). The gravelled road surfaces are recognized as an effective sediment reduction measure and the segments of Ambrose Creek Road most likely to produce sediment are already gravelled. This protective measure, in combination with BMPs, and timber sale contract provisions that control hauling during wet periods will reduce sediment to the practical minimum.

- **Clean Air Act.** Upon review of the EA, Chapter 3, I find that activities to be implemented in Modified Alternative 3 will be coordinated to meet the requirements of the State Implementation Plans, Smoke Management Plan, and Federal air quality requirements (EA pages 59 – 60).

- **National Historic Preservation Act, American Indian Religious Freedom Act, and Native Graves Protection and Repatriation Act.** Compliance with Section 106 of the national Historic Preservation Act has been fulfilled by the submission of a complete cultural resource inventory report, and SHPO concurrence was received (EA pages 179-181, and PF#K-Heritage3).

- **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 scoping or effects assessment.

ADMINISTRATIVE REVIEW AND APPEAL OPPORTUNITIES: This decision is subject to appeal pursuant to 36 CFR 215.11

A written appeal must be submitted within 45 days following the publication date of the legal notice of this decision in the Ravalli Republic Newspaper of Hamilton, Montana. It is the responsibility of the appellant to ensure their appeal is received in a timely manner. The publication date of the legal notice of the decision in the newspaper of record is the exclusive means for calculating the time to file an appeal. Appellants should not rely on date or timeframe information provided by any other source.

The appeal must be filed with the Appeal Deciding Officer in writing. It is the appellant's responsibility to provide sufficient project or activity-specific evidence and rationale, focusing on the decision, to show why my decision should be reversed. At a minimum, the appeal must meet the content requirements of 36 CFR 215.14.

Paper appeals must be submitted to:

For Postal Delivery:	For Hand Delivery:
USDA Forest Service, Northern Region ATTN: Appeal Deciding Officer P.O. Box 7669 Missoula, MT 59807	USDA Forest Service, Northern Region ATTN: Appeal Deciding Officer 200 East Broadway Missoula, Montana 59802 Office Business Hours are from 7:30 AM to 4:00 PM

Appeals may be FAXed to (406)-329-3411.

For electronic appeals, the e-mail subject line should contain the name of the project being appealed. An automated response will confirm your electronic appeal has been received. Electronic appeals must be submitted in MS Word, Word Perfect, or Rich Text Format (RTF). Electronic appeals must be submitted to: appeals-northern-regional-office@fs.fed.us

If an appeal is received on this project there may be informal resolution meetings and/or conference calls between the Responsible Official and the appellant. These discussions would take place within 15 days after the closing date for filing an appeal. All such meetings are open to the public. If you are interested in attending any informal resolution discussions, please contact the Responsible Official or monitor the following website for postings about current appeals in the Northern Region of the Forest Service:
http://www.fs.fed.us/r1/projects/appeal_index.shtml

IMPLEMENTATION DATE: If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

CONTACT PERSON: Copies of the Haacke-Claremont Vegetation Management Project Environmental Assessment, and the Decision Notice/Finding of No Significant Impact may be requested by contacting the Stevensville Ranger District Office at (406) 777-5461 or ID Team Leader Sue Macmeeken at (406) 363-7151.

For more information or questions concerning this decision or the appeal process, please contact Dan Ritter, District Ranger, at 88 Main Street, Stevensville, MT 59870 or (406) 777-5461 or Sue Macmeeken, ID Team Leader at (406) 363-7151.

David T. Bull
Forest Supervisor

4/8/08
Date

APPENDIX A - MANAGEMENT PRACTICES AND MITIGATION MEASURES

I am including the following management practices, design features, and mitigation measures as part of my decision.

Sensitive Plants

- When new landings, tracked line machine pads, or temporary road locations are identified, a botanist must survey prior to construction.

- Individual hand piles will generally not exceed 50 ft^2 (pile size approximately 6 to 8 ft in diameter).

- Disturbed sites (including skid trails and landings) will be evaluated and the timber sale administrator (TSA) and /or resource specialists will determine erosion control and revegetation needs. Topography, presence and condition of adjacent vegetation, and amount of disturbance will be used to determine need and treatment. Appropriate erosion control may include contouring, seeding, fertilizing, planting of shrubs, mulch and/or scattering of slash.

Soils

Mitigation measures designed to protect the soil resource have been summarized here for the following listed activities. All other soil protection measures not discussed here are covered by Soil and Water Conservation Practices (SWCPs) and Montana Best Management Practices (BMPs), which are included in Appendix A of the EA.

- Temporary roads will be closed and rehabilitated following their use by restoring the natural contour of the slope

Ground-based yarding[1]

- Historic skid trails will be utilized to the extent feasible in the ground based units.

- Harvest activities will discourage future illegal off road vehicles (OHV) use by placing slash at the beginning of the skid trails. Access to skid trails from landings will be closed by placing slash from the landing on the rehabilitated skid trail.

[1] If a contractor chooses to yard during the winter they would be required to comply with winter standard operating procedures and mitigation measures to assure the appropriate combination of snow depth and frozen soil conditions under the wheels or tracks/treads of equipment are met at all times.

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- Ground based yarding in this project will occur when soils are dry (soil moisture is near or below the permanent wilting point) or during adequate winter conditions.

- When possible, do not yard larger diameter (>15 inches) unmerchantable material in units where Coarse Woody Material is below standards.

Skyline yarding

- Feller/buncher operations will be monitored closely by the sale administrator and soil scientist to ensure soil quality guidelines are not exceeded. The feller/buncher operation will cease immediately if detrimental soil disturbance approaches R1 soil quality guidelines. Monitoring of feller buncher operations on private land and on the Flathead NF estimated detrimental soil effects between 2 and 8 percent. Through careful sale administration it is anticipated that this operation would be within 3 percent or less on this project.

- Harvest activities on skyline units with swing trails will discourage future illegal OHV use by placing slash at the beginning of the trails. Access to skid trails from landings will be closed by placing slash from the landing on the rehabilitated skid trail.

- Where possible, do not yard larger diameter (>15 inches) unmerchantable material in units where CWM is below standards.

Maintenance Burning and Prescribed Fire

- Upon completion of commercial harvest and prescribed fire activities, the following levels of coarse woody material shall be left. This material will include the combination of standing dead as well as down woody fuels.

Fire Group	CWM
2 and/or **4** = Warm, Dry Ponderosa Pine and Douglas-fir Habitat Types	5 to 10 tons/acre
5 and/or **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

- Upon completion of maintenance burning or other prescribed fire activities, at least 70 percent ground cover is necessary to prevent detrimental accelerated erosion and loss in soil productivity. In those

cases where ground cover is less than 70 percent prior to burning, consumption and loss of ground cover should not exceed 15 percent. Ground cover includes duff, organic soil horizons, basal area of vegetation, fine woody material, coarse woody material, and surface coarse fragments. Prescribe fire prescriptions will be designed to meet these soil protection requirements.

- CWM requirements must also be considered where prescribed fire is used. CWM larger than 15 inches in diameter will not be *intentionally* ignited by crews during hand lighting operations. It is understood that once the fire is lit by hand crews, the fire may burn into large CWM and combust various pieces.

- Allow time for nutrients to leach from slash prior to burning. The slash will be left through one winter after cutting to allow for initial decomposition and nutrient leaching.

Heritage Resources

- Site 24RA554, a surviving segment of the historic Bitterroot Direct road, is located in or adjacent to Units 5, 9, and 20. The segment will be flagged prior to implementation. No heavy equipment or skidding should occur on or across the road track. The Heritage specialist will monitor project activities in this area.

- Site 24RA0285 is surrounded by, but outside, two commercial harvest units. A 100-foot buffer zone will be established around the site perimeter. The Heritage specialist will monitor project activities in the vicinity.

- Site 24RA0049, an unevaluated lithic scatter, lies near the intersection of two Forest Service Roads which will be used in implementation. Parking and equipment operations should be confined to the road surface to avoid undercutting the road cut below the site. The Heritage specialist will monitor project activities in the vicinity.

- If previously unknown cultural resources are encountered during implementation of the project, activities in the area of the discovery will be halted and the Forest's Heritage program manager will be notified immediately. Activities will not be resumed until adequate protective measures are developed and specified in the field, and the required SHPO and tribal consultation regarding the new discovery has been completed.

Water Resources

No specific water resource mitigation measures would be needed for this project as proposed. Project design, BMP use and landscape characteristics would limit impacts to the lowest practicable amount. Refer to BMP list Appendix A in the EA for specific conservation practices.

Recreation

- Mitigations to reduce potential illegal OHV use are included in the soil section above.
- A tent site is located on private land adjacent to unit 3 in section 31. Layout of this unit should provide some screening of this site for asethetics.

Scenery

- Mark boundaries and trees as subtly as possible; paint trees above stump height away from view from roads and trails to the extent practical.
- In Unit 14 a 150 foot buffer will be maintained along Trail 313 to reduce visual impacts to the trail users.

Vegetation

- Noncommercial thinning units that contain large numbers of ponderosa pine or lodgepole pine will have a restricted operating season allowing cutting between the months of July 1 thru December 31. Where limbs and tops exceed three inches in diameter they will be bucked in four-foot lengths and scattered to allow time for larger boles to dry out and not become host sites the following year for Ips beetles.
- The cutting of ponderosa pine greater than 12 inches at stump diameter will have their stumps treated with Sporax® within 24 hours of cutting to prevent the spread of annosus spores.

Fuels

- Whole tree yarding, or yarding with tree tops attached, is required to reduce the amount of surface fuels in units proposed for commercial harvest. Yarding operations should be designed to minimize damage to residual trees.

Fisheries

- Commercial harvest will not occur within Riparian Habitat Conservation Areas (RHCAs). The widths and preliminary locations of RHCAs are included in Section III of the EA – Fish and Aquatic Habitats.
- Hand ignition of fire will be allowed within RHCAS, but not in wetlands. Fire will be allowed back into wetlands. Helicopter ignition will not occur in RHCAs.
- Noncommercial tree thinning could occur up to the stream or wetland edge. When thinning is proposed within 100 feet of streams the sites will be reviewed by the fisheries biologist or hydrologist prior to implementation to determine trees that are needed for bank stability, shade, or future large wood.

Wildlife

The following number of snags will be retained if they exist in the unit prior to treatment. Irregular distribution and small clumps are acceptable. Snags retained will include some from the largest diameter size class available within that unit.

Fire Group (FG)	Snags (average trees per acre)
Warm, Dry Ponderosa Pine and Douglas-fir (FG-2 & 4)	2-5
Cool, Dry or Moist Douglas-fir (FG-5, 6)	4-12
Cool SitesUsually Dominated by Lodgepole Pine (FG-7) Dry, Lower Subalpine (FG-7) Moist, Lower Subalpine (FG-9)	10-15

- Sufficient numbers of large trees will be included in the thinning guidelines to provide a source for large snags and coarse woody material into the future.

APPENDIX B - ALTERNATIVES NOT CONSIDERED IN DETAIL

NEPA regulations require that the reasons for eliminating any alternative explored but not developed in detail be discussed (40 CFR 1502.14(a)). The ID Team examined several different options for treatment and possible alternatives that were not fully analyzed. These options were:

Burning without commercial thinning	Not considered a viable alternative since difficulty in accomplishing, high expense, and risk of escape would be high. "Burn only" unlikely to succeed. Discussed in EA, pages 35, 44-45, 58.
Closing roads	Not considered viable alternative since Management Area direction is for roaded dispersed recreation in all three Management Areas (MA1, 2, 3a) and the roads in the project area are currently not causing resource damage. Discussed briefly in the EA, page 15.
Alternatives that didn't require a Forest Plan Ammendment • Coarse Woody Debris • Elk Habitat Effectiveness • Thermal Cover	Coarse Woody Debris (CWD). Recent research provides more ecologically based criteria for amount of CWD to be left. Since CWD did not surface as an issue, using better science seemed appropriate. Elk Habitat Effectiveness. Some analysis was completed to see if EHE could be met through road closures but almost all roads in the project area would require closing and that was not consistent with Management Area direction. Calculations of EHE are strongly influenced by small size of drainages and amount of National Forest within the drainages. Science does not support the need for widespread use of EHE across the forest to maintain elk populations. Also see discussion above on roads. Thermal Cover. The presence of thermal cover in winter range was identified after the three alternatives were developed. In response to the public comment and because of identified logging system problems in this same area, treatment of thermal cover in winter range has been dropped from the project. The No Action alternative requires no Forest Plan Amendment

Addressing Ambrose Culvert	Discussed at IDT meeting whether to include in an alternative or not. Line Officer made the decision not to include because: 1. Culvert too remote from project area (PF#J-Fish2) 2. Improving crossing a mid-level priority (EA page 137) 3. Would involve considerable coordination with private landowners 4. Did not meet purpose & need of project and wanted to keep purpose & need focused. 5. Relatively small size of project would not significantly increase traffic on road

APPENDIX C – RESPONSE TO COMMENTS

Comments were received from Friends of the Bitterroot and Montana Fish Wildlife and Parks (FWP). One other comment was received after the comment period closed and expressed support of this project.

FWP stated that they reviewed the EA, had no specific comments, but agreed with the proposed Forest Plan Amendments regarding elk (elk habitat effectiveness and thermal cover) in the project area.

Comment: *"We could find no disclosure of the estimated amount of board feet, jobs, or monies that could be expected from implementation. Additionally there is no discussion or disclosure of whether the proposed actions would even be salable in the extremely depressed wood products marketplace."*

Response: We included an estimate of board feet in the Decision Notice (2,500 to 4,000 thousand board feet (MBF)). It is anticipated that the advertised rate will be about $53/MBF or $8.56/ton with the expected high bid somewhat greater than this. All of our recent sales have been purchased by local mills or loggers who provide jobs and funds into our local economy. In spite of the poor timber market in the last 6 months, the Bitterrroot NF has successfully sold all advertised sales. The economic analysis completed for this sale (PF#K-silv11) indicates that this is an economically feasible sale.

To proceed with this sale was a deliberate decision by the Forest Supervisor to provide assistance to the local timber industry. We felt that providing green timber, instead of salvage, in a location with a limited log haul to mills surrounding Missoula would be highly desirable to prospective bidders.

Comment: *"The EA does not disclose that a reasonable range of alternatives was developed or considered. The EA preparers did not examine any viable alternatives that would not require amendments to multiple forest plan standards, avoid more adverse impacts to a 303d listed streamcourse, commercially log less acres and/or different logging units or use prescribed fire and/or noncommercial thinning alone without commercial logging."*

Response: In October 2007 the IDT met (PF#B-9, 42) to discuss internal and public issues regarding the proposed action and formulate alternatives to the proposed action. Roads, wildlife habitat, and fuel management (pro and con) were identified as significant issues. Scoping

comments (PF#D-scoping1-5) did not indicate any additional issues beyond these three that would drive the creation of additional alternatives. The ID Team examined several different options for treatment and possible alternatives that were not explored in detail in the EA. In response to this comment, a description of these options and alternatives was added to this document as Appendix B.

The line officer made the decision that the two Action Alternatives and the No Action Alternative described in the EA provided sufficient comparison to make a decision on number and location of acres to be treated. As is often the case, and true with this project, the final decision is a modified version of one of the alternatives examined in the EA.

Comment: *"The EA acknowledges private lands logging and roading to the west has thinned adjacent forested lands (thereby supposedly reducing potential for significant wildfire effects) but then fails to disclose or mention the extensive logging and road systems on the Lolo NF lands to the east that are adjacent to this analysis area."*

Response: The eastern edge of the Haacke Claremont analysis area is bordered by the
Lolo National Forest (NF). There is a significant flat-topped ridgline separating the two forests. Much, if not all of the land administered by the Lolo NF, within proximity of Haacke Claremont, was harvested and roaded in the late 1960's and early 1970's. However, much of this harvested area is not adjacent to or bounded by the Haake Claremont analysis area. Many of their regeneration harvests are located in West Fork and Lavina Creek drainages. Spatially, this does breakup fuels on the Lolo NF side but does not address the Bitterroot NF side, especially the analysis area.

The Lolo NF is not currently planning to harvest or build roads near the Haacke Claremont analysis area. Some noncommercial thinning has taken place in these old regeneration units on the Lolo. The closest area, but many miles away, currently proposed for treatment is the Rock Creek Analysis which treats WUI fuels.

Comment: *"The EA fails to adequately discuss or disclose that wildfire is dependent on many factors besides fuels. Drought conditions, slope aspects, winds, lightning strikes, and time of day or night when the fire moves through an area significantly affect wildfire behavior. There are also studies that indicate forest areas that have been opened up by logging are more likely to be drier, hotter, prone to increased wind effects and have more fine fuels to carry wildfire".*

Response: The intent of this project as described in the EA is to modify the factors associated with wildland fire behavior and effects. We can not change slope, aspect, general wind conditions, lightning strikes, or the time of day that a fire moves through an area. We can however modify fuels and therefore, change factors that effect fire behavior. Agee and Skinner (2005) state fundamental principles which are important for fuel reduction treatments: reducing surface fuels, increasing the height to live crown, decreasing crown density, and retaining large trees of fire-resistant species. The EA addresses the issue of a changed post-treatment fire environment by stating that the proposed treatments would reduce the amount of shading on surface fuels, increase the wind speeds and fuel temperature within the stand and reduce the relative humidity and fuel moistures. These factors may increase the probability of ignition over current conditions and, in some instances, surface rates of fire spread will increase. However, by reducing ladder fuels, surface fires, even with greater intensity, have a lower potential for progressing into crown fires, and by reducing canopy bulk density, there is a lower potential that individually torched trees will progress into an active crown fire. Lower overall fireline intensity would increase opportunities for safe fire management actions (Van Wagner 1977, Rothermel 1983, 1991). The proposed treatments of thinning will increase canopy base heights, reduce crown density, and retain larger fire resistant trees. Additionally, the proposed treatments will reduce surface fuels because the whole tree including branchwood and foliage will be treated at the landing or removed for biomass utilization. Harvesting will then be followed with prescribed fire.

Additionally, on page 55, the EA states that the weather variables and fuel moistures change seasonally and diurnally and are the primary factors that affect fire behavior. Within the project area, normal fire season runs from May through September. During fire season, gradual drying of forest fuels occurs throughout the summer. July and August is the peak time of year for thunderstorm development, where southwest flows bring moisture from the southwest into the Bitterroot Range bringing various amounts of rain and lightning fires. Recent history has showed lightning occurring into early October.

Agee and Skinner (2005) cite five empirical examples for efficacy of fuel treatments based on observations of wildfires burning into previously treated stands. These observations indicate that type of fuel treatment, scale, and time since treatment affect changes in wildfire behavior and effects. Opening up a stand can create drier, hotter, and windier conditions, and have more fine fuels for the fire to carry. Van Wagtendonk (1996) found this in his simulated studies of fuel breaks, especially in grass. He states that more open canopies will result in an altered microclimate near the ground surface, with somewhat lower fuel

moisture and higher windspeeds in the open understory. But he goes on to say that fireline intensity may decrease and rate of spread may increase. This is supported by Agee et al. (1999) as he states that the openings of the forest areas are not designed to stop fire, but to allow suppression forces a higher probability of successfully attacking a wildland fire. Also, as emphasized earlier, by opening up the forested areas you help reduce the potential for crown fires to become established, thru the reduction of ladder fuels that could allow the fire to directly gain access into the forest crowns or by the heating of the crowns by radiant and convective heat from the burning of the residual larger fuels.

Comment: *"The EA proposes an amendment so as not to comply with the EHE standard and claims it is insignificant. We disagree.....The Regional Foresters ROD states that "road closures will be utilized to maintain 50% [EHE]. The EA apparently asserts that the plan EHE standard can be basically disregarded because of increased elk numbers ..... We maintain that withl illegal cross-country use and the cumulative adverse effects from private lands road and offroad use that it is likely that the existing EHE levels may be much worse than disclosed in the EA."*

Response: The EA discusses elk populations and trends on pages 88, 89 and 97, and Elk Habitat Effectiveness (EHE) on pages 91, 92 and 99 to 100. The EA discusses the rationale for a site-specific Forest Plan amendment to allow EHEs in the project area to continue to not meet Forest Plan standards on pages 2, 13, 18, 21 and 99-100.

The analysis and proposed amendment disclose that elk trend counts in the area meet and exceed the Forest Plan Objective of maintaining the current (1987) level of big-game hunting opportunities, since they have more than doubled since 1987 despite the fact that EHEs in the area do not meet the Forest Plan standard. Elk populations have increased despite the existing low EHEs, and also despite whatever additional effects may be caused by illegal off-road use. The EA also discloses that the elk populations in the area and in most hunting districts throughout the Bitterroot drainage exceed the Montana Department of Fish, Wildlife and Parks' (FWP) population objectives, and that FWP has expressed a desire to reduce elk numbers in this area as well as other areas to reduce elk damage to private property. Given this population data, it is difficult to make the case that existing EHE percentages are limiting elk numbers, even though they do not meet the Forest Plan EHE standard. Therefore, maintaining existing EHE levels should have little effect on existing elk numbers, and would not jeopardize meeting the Forest Plan Objective of maintaining the current (1987) level of big-game hunting opportunities. The Montana Department of Fish, Wildlife and Parks

supports this view, as they submitted a letter commenting on the EA that specifically supported the proposed site-specific Forest Plan amendment for EHE in the project area (PF#G-comments1).

The commenters are not correct when they assert that EHE is site specific to the Management Areas (MAs) involved in the project. Per the Forest Plan (II-21), EHE is calculated by third-order drainages, not MAs.

Comment: *"The EA proposes an amendment so as to not comply with Forest Plan Thermal Cover standard and asserts it is not insignificant; again we disagree. The EA vaguely asserts that "research has cast doubt on the necessity for thermal cover." It seems that MtDFWP asserts otherwise. In comments received on the current B-DNF draft plan, the DFWP stated "Thermal cover is extremely important to keep big-game cool in the summer and warm in the winter and should be addressed"."*

Response: The existing condition for elk habitat, including thermal cover is disclosed in the EA on pages 89 – 91. Effects of the alternatives on elk habitat including thermal cover are disclosed in the EA on pages 94 – 96. Cumulative effects to thermal cover are disclosed in the EA on pages 98 to 99.

After further field review, the Forest has determined that logging system issues make it infeasible to harvest the winter range thermal cover that exists in Units 13 and 28. As a result, the portions of those units that support winter range thermal cover will not be affected by any of the alternatives. Existing winter range thermal cover percentages will not change under any of the alternatives. As a result, there is no longer a need for a site-specific Forest Plan amendment to allow the Forest to harvest winter range thermal cover in this area.

Many publications describing historic vegetation in the Northern Rockies make it clear that winter range areas used to be much more open than they currently are (Leiburg 1899, Gruel 1983, Arno 1976, Habeck 1994, Gallant et al. 2003), and supported only a limited amount of forest structure that would have qualified as thermal cover. The EA cites research published in a highly respected wildlife research journal that shows that high amounts of thermal cover are actually detrimental to elk (Cook et al. 1996). The EA also points out that elk populations in the Bitterroot drainage have increased dramatically under conditions that generally do not meet the Forest Plan Record of Decision (ROD) standard for thermal cover in winter range. These facts imply that the Forest Plan ROD's requirement for maintaining at least 25% thermal cover in elk winter range is unnecessary for sustaining high elk populations or for meeting the Forest Plan objective of maintaining the current (1987) level of big-game hunting opportunities. The Montana Department of Fish,

Wildlife and Parks supports this view, as they submitted a letter commenting on the EA that specifically supported the proposed site-specific Forest Plan amendment for elk thermal cover in the project area (PF#G-comments1).

Comment: *The EA asserts that there is a 470 acre security area within the project area. We believe that this claim is not accurate and we disagree that it is a viable security areas under the Hillis criteria. Road #13130 goes directly into the center of the proposed security area... and off-road vehicles drive around the barriers on #13130 regularly. .....non-commercial thinning and prescribed fire through the center of the 470 acre security area ...will serve to expand the sighting distance for hunters an further adversely affect wildlife security."*

Response: It is important to understand that the Forest Plan does not include the elk security concept as postulated by Hillis et al. (1991). There is no direction in the Forest Plan to complete an elk security analysis in project planning, and there are no Forest Plan standards that relate directly to elk security. The Forest includes this analysis to better understand the existing condition and how elk may be affected by management actions.

The 470 acre security area identified in the EA (pages 92 and 93) is not perfect, but it does meet many of the criteria set forth in Hillis et al. (1991). The area is more than one-half mile from roads open to motor vehicles during the hunting season, is mostly composed of relatively dense cover and is situated in an area that is difficult to reach because of rugged terrain. Most of the security area itself is very rugged, and is difficult for hunters to traverse on foot or to retrieve game from. The eastern end of this security area is accessed by a closed road that undoubtedly receives legal non-motorized use as well as some illegal motorized use during the hunting season. Hillis et al. (1991) acknowledge that closed roads through security areas may increase elk vulnerability, and recommend that roads within security areas be kept to an absolute minimum. However, they do not exclude areas from providing elk security solely due to the presence of a closed road. The non-commercial thinning proposed in Unit 29 (a small portion of which is within the security area) would increase sight distances to some extent in the short term and would thus increase elk vulnerability, but sight distances would decline as the leave trees responded to the thinning by increasing their crown diameters. The areas of prescribed burn Unit 12 that are within the security area would also be opened up to some extent by the burn, which could also increase elk vulnerability in the short term. However, the Forest is confident that this area will continue to provide a functional security area for elk following implementation of either action alternative.

Comment: *The EA apparently fails to discuss or disclose whether or not the plan standards for old growth retention for MA3b are in full compliance within the project area and haul route*

Response: The EA did not disclose old growth percentages within MA 3b, which is limited to the riparian area along streams. MA 3b tends to be very narrow along the high gradient streams that are typical in the project area. The Forest did not conduct an analysis of MA 3b old growth because there are no treatments proposed within this MA that could affect old growth. The only activity that might occur within Riparian Habitat Conservation Area buffers is precommercial thinning which poses no threat to old growth. Therefore, the project would have no effects on the existing condition for old growth within MA 3b.

Comment: *"The proposed project's activities (log hauling) will potentially increase sediment levels 50% more than a "low traffic" situation (p.194). We believe that the proposed activities will not adequately comply with a federal agency's responsibilities under the Clean Water Act and the NFMA."*

Response: Please refer to the 2nd and 3rd paragraphs on p. 194, Haacke Claremont EA, for discussion on these points. This discussion puts the potential sediment from the proposal in context with natural levels, and suggests the sediment increase from hauling is a minor and short-term change from existing condition.

Comment: *"North Burnt Fork is also on the 303d list."*

Response: The Montana Clean Water Act Information Center web site states the following on North Burnt Fork: "Brook trout are abundant, year-round residents from river mile 0.0-10.5;....From the macroinvertebrate taxa present at the upper site, it seems likely that water quality was excellent in this reach. Cold water temperatures were indicated by the presence of at least 5 cold stenotherm taxa. Stable streambanks, natural channel morphology and undisrupted riparian vegetation were implied, and periodic dewatering or scouring sediment pulses seemed unlikely."

Map inspection, field conditions and available information from this site suggest the impairments to North Burnt Fork are related to agricultural and grazing-related issues originating off-Forest. Please also see paragraph 2, p. 191 for further discussion of sediment issues in areas that could affect water quality in North Burnt Fork Creek.

Comment: *"Sawmill Creek is not on the Impaired watershed list, but again, even a casual inspection of Sawmill Creek would reveal it is very impaired by past roading and logging activities."*

Response: There is no commercial harvest, road building or log haul proposed for the Sawmill Creek drainage, and no potential for these activities to affect water resources. Please refer to Project File Document "Water1", paragraph 3, p. 13 for discussion of precommercial thinning and prescribed fire effects. Transport vehicles for thinning and burn crews would likely be light trucks, and possibly medium to light (Type 2 through 6) wildland fire engines. The combination of limited treatments and access vehicle characteristics is highly unlikely to negatively affect water resources in the Sawmill Creek drainage.

Comment: *Irresponsible and illegal Off-Highway Vehicles (OHV's) use is significant in the area and harvest and burning activities would result in creating potential opportunities for off road access.*

Response: The Haacke-Claremont area is identified as having low to moderate recreation use. The project area has not been identified by the Bitterroot Forest as a problem area for illegal off road use (EA page 197). This may be due in part to the light recreation use in the area and existing density of roads open to public travel.

The potential does exist for illegal cross country travel when trees are cut and areas become open by burning. This is disclosed and discussed in the EA on page 197. Because of this concern, mitigation measures to discourage illegal OHV use are included in the decision (Appendix A of the DN & FONSI). Potential OHV access points from skid trails, skyline corridors, and landings will be closed by rehabilitating and placing slash at the beginning of the trails. Law enforcement patrols to address illegal OHV use will occur as funding and personnel allow.