Appendix A - Response To Public Comments

Table A-1: List of People or Groups Providing Comment to the EA

Commenter	Letter #
Sara Johnson, Native Ecosystem Council, Willow Creek, MT	1
Keric Hill, Kihei HI	2
James Lyon, Washington D.C.	3
Sarah Lyon Jackson Lease holder Rumbaugh Ridge	4
Victoria R. Taylor, Provo Utah	5
David Adams, Salt Lake City, UT	6
Bill Garff, Salt Lake City, UT	7
John Lyon, Co-holder Rumbaugh Ridge	8
Rebecca Hill, Kihei HI	9
James Lyon, Leaseholder Rumbaugh Ridge	10
Dorothy Lyon Leaseholder Rumbaugh Ridge,	11
Christian Maughan, West Richland WA	12
Doug Hansen, R-Y Timber, Livingston, MT	13
Charlotte Jacobsen, England	14
Peter Bogusko, West Yellowstone, MT	15
Michael Bowersox, West Yellowstone, MT	16
Kasi Craddock, West Yellowstone, MT	17
Patricia Dowd, Greater Yellowstone Coalition, Bozeman, MT Thomas DeLuca, Wilderness Society, Bozeman, MT	18
Stephany Seay, Buffalo Field Campaign, West Yellowstone, MT	19
Stephany Seay, West Yellowstone, MT	20
Tania Lyon, Pittsburgh, PA	21
Blair Anderson, West Yellowstone, MT	22
Madison-Gallatin Chapter of Trout Unlimited	23
Lewis Hawkes, Yuma, AZ	24

General and Miscellaneous Comments

Comment: Why the ***MA 13 direction with generally no commercial thin*** will occur fits with this project?
Letter & Comment #: 1-8

Response: "No commercial thinning is planned." is a statement not a directive. It does not imply commercial thinning is prohibited but rather that it was an uncommon method at the time the Forest Plan was developed. In the mid 1980's, it was recognized that commercial thinning within Intermountain forests (Rockies) was not economically feasible in terms of maximizing individual tree growth. Commercial thinning was not a common practice because forest management centered around maximizing tree growth for forest products. The intent of thinning for the Lonesome Wood project is to separate

crowns of individual trees to reduce crown fire potential to reduce wildland fuels and to enhance aspen stands and not to maximize tree growth for timber management purposes.

MA 13 standards identify that even-aged and uneven-aged harvest method systems would be included. The proposed treatment is an intermediate harvest with the long term goal of maintaining a two-aged forest stand (DN, Appendix B) for the protection of wildland urban interface values and an evacuation route for forest users and emergency responders. The forest has been managed extensively in the vicinity of the project. The grizzly bear population has recovered and been delisted. (EA, Appendix A, p. 44) Given that the overarching MA goal of recovering grizzly bear has been achieved with similar and more intense harvest prescriptions, the treatment in Lonesome Wood is compatible with MA direction.

Comment: Define size of ***project area.*** Define size of cumulative effects area, provide map
Letter & Comment #: 1-22

Response: The "Project Area" as defined for this proposal extends approximately 1-1.5 miles upslope from the homes and evacuation route. That area is approximately 23, 600 acres. The "Project Area" perimeter was tied to all of the treatment ideas considered prior to the initiation of NEPA. The extent of treatments presented in scoping, were down sized considerably.

The "Project Area" is different than the "analysis area". Each specialist defined an analysis area appropriate to the potential effect for the resource. The resource analysis boundaries are disclosed in the EA in Chapter 3, Appendix A by resource and/or in Specialist Reports.

Comment: Recommend the selection of Alternative 3.
Letter & Comment #: 2-1, 3-1, 4-1, 6-1, 8-1, 9-1, 10-1, 11-1, 12-1, 14-1, 21-1, 22-1

Response: Noted. There were commenters that opposed the project as well, but they stated general opposition and did not request the selection of a particular alternative. There were letters or commenters that indicated general support.

Comment: One would have hoped there would be significantly more mitigation for watershed, fisheries, recreation, not to mention the aesthetics.
Letter & Comment #: 3-2, 8-2

Response: The presentation of design features common to action alternatives (EA, pp. 37-44) appears to have caused some confusion. Potential impacts to most resources were minimized through project design, which is captured on pages 37-44 and Appendix B of the EA. While many of these features are required by law or Forest Service direction such as from handbooks, manuals or the Forest Plan, a number of design criteria are specifically tailored to this project. Additionally, EA, pp. 32-33 discloses mitigation

associated with Alternative 3 that was developed specifically to respond to issues from scoping.

In an effort to make the protections more apparent, the Decision Notice will present mitigation and design criteria so it is clearer which design features are specific to this project versus general practices.

> **Comment:** There was some ***misunderstanding about the proposed treatments***. For example, comments stated "Fuels reduction is essentially clearcutting habitat." and "Precommercial thinning implies future logging."
> **Letter & Comment #: 15-6, 16-4a, 16-7, 19-1**

Response: Clarification of treatment prescriptions.
Appendix B, which has more detailed prescription information, was added to the Decision Notice to provide a more detailed description of the thinning treatments and a better understanding of which trees that would be targeted for removal.

There will be no clearcutting. The EA, page 11 states that "Generally the treatment would remove 50-60% of the existing trees per acre in all diameter classes." An emphasis will be placed on thinning (or killing) from below many of the smaller trees, but at the same time leaving some of these smaller trees in all diameter classes (if present). These smaller trees will provide for the future overstory trees when the older overstory trees die from disease/insect attack and wildfire/prescribed fire damage.

Timber stand densities range from 120 to 4400 trees per acre and are highly variable across the Project Area. On steep, north and northwest facing slopes, stand densities were at the higher end of the range with 200 to 500 trees per acre greater than 5 inches diameter at breast height. On the more gentle slopes, overall densities were highly variable, but densities in trees greater than 5 inches diameter at breast height were between 200 and 300 trees per acre. Generally a majority of trees on an acre of ground are less than 5 inches in diameter so a majority of trees removed will be in diameter classes less than five inches. The **thin from below concept**, which is to be applied in this project, is to remove trees in all size classes to meet spacing guidelines but emphasize removal of the smaller trees first to reduce the ladder fuel continuity. (Novak 2007) While some may perceive that 50-60% of the overstory or large trees will be targeted for removal leaving relatively few larger trees, in terms of numbers of trees, a majority of trees to be removed will be smaller trees (less than 6 inches in diameter). The larger trees would be removed as needed to achieve desired crown spacing.

Precommercial thinning is not proposed. Commentors refer to precommercial thinning in roadless that implies future commercial harvest. The prescribed treatment is described as "**Acres of small tree thin"** in the activity tables, EA 1-1, 2-1, 2-2. The narrative description again talks about small tree thin, thinning from below and reduced stand density thinning.(EA pp. 11-12) The emphasis is to reduce ladder fuels and canopy or crown fuels to desired spacing to reduce fire behavior. There are no implied plans to harvest large trees in the future in the inventoried roadless. In general for the project area

future treatments (approximately 30 to 50 years from today) may be considered to maintain desirable stand structures so control and or intensity of fire is maintained at desirable levels.(Novak 2007) The condition of the landscape, direction and policy emphasis in 30-50 years is difficult to predict and therefore not reasonably foreseeable.

Comment: Concerned with likelihood of increased windthrow leading to areas that will end up to be more like a clear cut.
Letter & Comment #: 15-9, 16-11, 20-12

Response: This concern was addressed in EA, Appendix A, pp. 43. This is always a concern when thinning occurs in older forests; especially in lodgepole pine stands. However given the nature of the soils in this area and the fact that little in the way of windthrow has occurred in this area after thinning, windthrow events are unlikely. The most notable windthrow events have occurred along some clearcut boundaries. Sometimes, along clearcut boundaries (and only on one side of those boundaries), about 30% to 50% of trees would blow over about one tree length into the uncut forest.

Comment: There are high costs with implementing the project with no benefits to fuels reduction.
Letter & Comment #: 16-10, 20-11

Response: The Fire Behavior Assessment for Post Treatment Conditions associated with Alternative 3 shows effective fire behavior reductions for treatment units. (EA pp. 68-73) Alternative 3 would achieve desired fire behavior reductions that benefit wildland urban interface and improved evacuation routes on fewer acres than alternative 2 by 333 acres but would make notable improvements on 2712 acres and improved the evacuation route on approximately 16 of 18 miles of road. (EA pp. 51)

Some degradation of habitat is likely but was determined to be non-significant as displayed in EA, Chapter 3, pp. 75-95, Appendix A pp. 8-15, 43-62, and the Finding of No significant impact. The rationale for the decision and the trade offs associated with the decision are discussed in the Decision Notice section V.

Based on cost analyses for wildland fires that have occurred on the Gallatin National Forest, suppression costs for wildland fire events of 100 acres in size or less, range from $5,000 to $10,000 per acre. Suppression costs of wildland fires greater than 100 acres in size range from $400 to $3,500 per acre. In the wildland urban interface, the Fridley Fire of 2001 burned approximately 26,873 acres and averaged $465 per acre (Individual Fire Report: Fridley, 2001), while the Purdy Fire of 2001 burned 5000 acres and averaged $1000 per acre (Individual Fire Report: Purdy Creek, 2001). Nearer to the Lonesome Wood project, the Beaver Creek Fire (2000) was 10,800 acre at $278 per acre and the Buck Creek Fire (2000) was 5 acres at $9,000 per acre. Those fires were not in the wildland urban interface. The range of suppression costs varies depending on values at risk, acreage and accessibility. (Taylor Fork Fuels Reduction EA, Appendix A, pp. 9-10) Most recently, suppression costs for the Madison Arm Fire 2007 in the Hebgen Basin

averaged about $ 875/acre for the 3600 acre fire. (Individual Fire Report: Madison Arm, 2007). In addition to fire suppression costs during wildland fire events, there are monetary costs associated with restoring burned areas and often times there is unmitigable damage to natural resources that can only be restored through time.

Inclusion of commercial harvest as a treatment not only reduces the fuel hazard but provides an estimated $461, 863 dollars in revenue to implement other non-revenue generating fuel reduction and land stewardship treatments. (EA, Appendix A, pp 16) The total acres treated and area with reduced risk averages $123/acre to implement using the cost estimates in the EA, Appendix A, pp. 16, of $333,718 for estimated cost /2712 acres treated. While these numbers are not precise, the average cost per acre is considerably less than the cost of fire suppression per acre in the wildland urban interface or where lives are threatened.

This estimates discussed in Appendix A are intended to be used by the decision maker as a comparison tool of relative costs. In general, the analysis shows that Alternative 3 would cost less to implement than Alternative 2 and easily less than $200 acre to implement.

In conclusion, while there are costs associated with the project, there are benefits in reducing fuel hazard. The risk of wildland fire threatening property and lives in the identified wildland urban interface and evacuation route is substantial. (EA pp. 5-11) The agency has been directed to prioritize treatments that reduce risk to property and lives. (EA pp. 20-21) Fuel reduction treatments have been shown to be effective at reducing the risk both in the analysis (EA pp. 51, 58-65) and from studies discussed in the EA (pp. 6). My decision includes many design features and mitigation that effectively minimize potential impacts to all resources. The costs and benefits of the project outweigh the probable impacts.

Comment: Logging will create an eyesore.
Letter & Comment #: 17-6

Response: There will be visible impacts from logging. However, the project was designed to minimize the potential impacts to the scenery from logging. The EA listed numerous design features on pages 37-40 under the headers for Associated Activities Common to action alternatives, Roadless Protection, Scenery Protection and Soil Protection that will minimize the visual impacts of logging. The project is designed to have landings away from the Denny Creek Road to minimize impacts to scenery along the road. Instead, there will be short temporary roads to landings offset from the road. The format for alternative descriptions and design features seems to have confused readers. Mitigation and design features will be presented in a format in the decision to make it clearer to readers what protections are in place.

The Forest Landscape Architect completed an analysis of the alternatives and provided the design criteria for scenery protection. The project as planned meets Forest Plan Visual Quality Objectives. A summary of the supporting analysis is in EA, Appendix A

pp. 1-6. The full Aesthetics/Scenery Resource Report (Ruchman 2007) from the Landscape Architect is available upon request.

Comment: Recommend recognizing the Trout Unlimited Settlement Agreement in the Background section of the EA to recognize ongoing cooperation.
Letter & Comment #: 23-1

Response: See the DN page 44, Consideration of Public Comments for a discussion of cooperation with the Madison Gallatin Chapter of Trout Unlimited.

Comment: An alternative should be considered that develops another route from Hebgen Lake Dam to the project area.
Comment & Letter #: 23-4

Response: To construct a road from the end of the Hebgen Lake road to Hebgen Dam would require 1.5 miles of new road at a cost between $100,000 and $200,000. Numerous large and expensive construction challenges would be encountered along this stretch of lake and approach to the dam, from the risk of mass wasting of soil into the lake and high rock content.

According to Brent Mabbott (PPL-Montana, personal communications), an alternative access across Hebgen Dam is not logistically feasible. Any new road prism would have to be carved across a steep rocky slope immediately above the intake raising the issues of increased erosion and slope instability. Hebgen Dam is an earth and fill dam with a narrow access road across the top used only by maintenance and operation personnel. This road would have to widened to meet FS standards for two-way travel. This would possibly require the top of the dam to be widened. The public is presently restricted from accessing the dam by PPL-Montana to provide security to their facilities and to reduce liability.

If constructed, the road would pass through Forest Plan Management Area 15 (MA 15). In MA 15 "Roads will not be constructed for surface management except to provide public access. Allow roads for private access, special use mineral activity, and for access to other management areas." In this case, additional public access was not identified as a need in either the Forest Plan (GNF 1987), or the recently approved Travel Plan (GNF 2006). It has been determined that sufficient public access into the area is provided by the current road systems. Private access has been provided to each private parcel, none are landlocked. There has been no mineral activity proposed nor is there a need to access other management areas.

If constructed, the road would also pass through Inventoried Roadless lands (ref. FP EIS, pg C-103). The Lionhead Roadless Area #1-963 extends down to the lake shore for virtually the entire length of the new road construction. Current Roadless direction precludes constructing roads within Roadless Areas without significant need and approval by the Regional Forester. In this case, no significant need can be identified.

A road in this location would have some value as a secondary fire escape, but at a high economic and resource cost. Hebgen Lake is in close proximity to most of the uses and homes in this area and can serve as an emergency fire escape route. For these reasons the Alternative was not considered in detail.

Fire Risk/Evacuation Route Related Comments

> **Comment:** Address cumulative effect of past logging toward reducing fire risk. If past logging does not meet the objective, what will be done differently to with this project to actually reduce fires?
> **Letter & Comment #:1-31**

Response: Past logging has helped some in reducing fire risk/intensity along the Denny Creek Road and WUI areas around ½ mile from the Denny Creek Road. However past logging did not focus nor likely even considered fire fighter safety, improving the evacuation corridor known as the Denny Creek Road and improving fire protection for the summers homes along this corridor. Past harvests focused mainly on replacing old forests with younger faster growing forests to improve the timber growing potential of this area. In addition, older harvests also aimed to reduce high risk stands from mountain pine beetle attack (and to also remove, through salvage operations, beetle killed trees) and any improvement related to wildfire and fire safety was purely coincidental. In the past many of the logged units would be broadcast burned which reduced dean and down fuels thus created a fuel break's, firewood service contracts were administered from the left over logging material then piling and burning the remainder.

What makes this project different from other previous harvest activities is the focus we have had from the very beginning to fire fighter and summer home residence safety as it relates to wildfire. By thinning nearly all unlogged forest stands along this road corridor up to ½ mile distance, we believe that we will greatly improve this roadway as an evacuation corridor and help better protect homes along this area of treatment in the event of wildfire. Another difference in the past and present logging practices to reduce risks of wildland fire is that current project planning takes wildland fire hazard and reduction in to consideration, accounting for hazardous fuels including natural and projected biomass produced, and planning the removal whether hauling, chipping, bio mass utilization or burning.

> **Comment:** Address how long term fire reduction will be done give that forest thinning is a standard way of increasing regeneration. What type of regeneration do you expect in commercial thins? What will this regeneration do to future fire risk? What is the long range plan for the stands?
> **Letter & Comment #:1-32, 1-33**

Response: Thinning is not a standard way to increase regeneration in this area of the Western United States The standard way to increase coniferous regeneration is to either

plant or to create large enough openings where lodgepole pine and in good years Douglas-fir can naturally regenerate through seed fall. The type of coniferous regeneration we expect from these thinnings will create conditions into the future that will necessitate another weeding or thinning to maintain surface fire conditions in the event of wildfire (rather than crown fire conditions). We expect that these thins will create conditions where surface fires are likely for 25 to 35 years. However, to ensure our projections are reasonable, exams will begin around 2030 to 2035 to evaluate if further treatments are necessary to ensure surface fire conditions are maintained. Additionally, the long range plan is for these stands to have a continuous forest canopy for decades to come. A continuous forest canopy means a two-aged stand where some (not all) younger trees are allowed to grow in the understory which will provide for the next overstory forest. The cycle planned for is: the overstory trees continue to grow while the understory trees begin growing up underneath these overstory trees. Over time these understory trees will replace the older overstory trees (as they die from disease and insects) and as they grow larger new understory trees will regenerate, thus creating a two aged condition and what is hoped for: continuous forest cover.

Comment: ***Prescribed burn in Unit 30a and 30b*** -Reduce the risk to homes on private property during implementation. Burn Plan considerations – prefer slashing not piling in 30b due to proximity to homes, place piles as far away from homes as possible to reduce risk of escape and visual impact, burn piles when there is snow on the ground, ensure adequate personnel to assure private property protection.
Letter & Comment #: 6-2, 7-2, 14-2, 14-3

Response: The treatment for units 30b and 30a do not include broadcast burning in Alternative 3. The prescribed treatment in Alternative 3 was modified to reduce concerns by adjacent homeowners and because the on the ground condition did not support the need for broadcast burning. After closer review a more effective treatment includes slashing and scattering of small conifers, with some hand piling where there are accumulations of slash or natural fuels.

A copy of the comment letter #6, #14 was provided to the Fuels Specialist for incorporation when the burn plan is prepared. The comments reiterated the earlier discussion held between the commenter and the Fuels Specialist.

Comment: ***Fire may still take our properties in a serious conflagration***.
Letter & Comment #: 11-2

Response: Noted. The proposal is not intended to mitigate the effects in all fire scenarios. The proposed treatments for Lonesome Wood are designed for lowering the fire behavior and enhancing the safety for public and wildland firefighter. In extreme wildland fire behavior and conditions there is a higher risk of safely suppressing fire or evacuating from a threatened area. The assumptions and conclusions used for this project analysis and whether the treatments achieve the purpose and need are not based on extreme fire conditions. The parameters for planning assumed average to high fire weather conditions with temperatures in the 85-90 f. , relative humidity's in the 10's and

winds up to 20 miles per hour. The proposed fuel reduction will lower the probability of fire starts, intensity and spread but will not stop catastrophic fire. The desired vegetative conditions after treatments in average fire weather conditions should result in lower fire behavior that could be safely suppressed with engine and hand crews. This fire behavior is described as: flame lengths under 4 feet, rates of fire spread 20 chains or less, fire intensity under 100 btu's and spotting distances under ½ mile. (EA. chapter 3, 3.2.1 Fire and fuels)

> **Comment:** Is ***the evacuation route justification*** sound? I believe the Forest Service would evacuate people before imminent danger.
> **Letter & Comment #: 11-3**

Response: "Evacuation route is a safety zone where people could safely egress or stage in with or without vehicles if threatened by wild land fire." "Safety zone is a preplanned treated area of sufficient size and suitable to provide protection from known hazards. The hazards to humans during wildland fire are heat, smoke and lack of breathable air."(EA, pp. 61) See the Fire and Fuels Issue discussion and analysis on pages EA pp. 61-75 for more information. Alternatives considered but not carried forward (EA pp. 46-47) also discuss some different evacuation route scenarios and rationale.

The County Sheriff office has the responsibility for public protection and the authority to do evacuation orders. Forest Service Law enforcement and fire fighters often work with the sheriff's enforcements when evacuations are ordered. There are times in a wildland fire situations (especially during initial attack- 1st few hours of fire report) that fire may move rapidly and roads maybe over taken with fire and smoke. This was the case during the Madison Arm Fire in 2007. Residents of the Madison Arm had less than 15 minutes to evacuate when the fire blew up.

The proposed thinning will result in lower fire intensity along evacuation routes. The fire behavior conditions would allow citizens to leave the area and facilitate emergency resources coming into the fire area. Also the proposed thinning will provide possible safety zones in the chance that a section of the evacuation route (Denny creek road) does become blocked with falling trees, burning embers or smoke.

> **Comment:** Helping homeowners undertake ***defensible space*** work like reducing ladders fuels, clearing brush and putting on metal roofs is a more sensible way to protect private property.
> **Letter & Comment #: 16-12**

Response: Defensible space information has and will continue to be distributed by the Forest Service, state, local fire departments and many groups. (i.e.: web links)

http://www.firewise.org/
http://www.nrmrcd.org/index_files/Page25807.htm
http://www.keepgreen.org/start.htm
http://www.firesafemt.org/index.php
http://dnrc.mt.gov/forestry/Fire/Prevention/default.asp

The Forest Service along with other agency Fire Departments has had local Wildland fire awareness days, workshops and meetings. One of the opportunities the Forest Service has helped to promote is grant opportunities with the Northern Rocky Mountain Resource conservation and Development (RC&D) for home and property owners. http://www.nrmrcd.org/index_files/Page25807.htm

Wildland fire prevention, home safety-defensible space and hazardous fuels reduction are common topics in communication with home and private property owners and many of the Forest Service personnel; whether working at front desk , recreation , wildlife, law enforcement, range, weeds, fisheries, wilderness, fire/fuels, prevention, trails and lands. Information and contacts have been and will continue to be passed on. For more discussion about Gallatin County efforts and cooperative education efforts see pages 1-3 of the EA.

> **Comment:** Is it not contrary to the purpose and need to leave activity generated fuels in the 3"+ class per the Forest Plan amendment?
> **Comment & letter #: 23-5**

Response: The proposal calls for the reduction of material less than 3" in diameter to 10-15 tons per acre because this material is flammable and supports the initiation and spread of a fire. Leaving this amount of large woody debris does not conflict with the Purpose and need. The material over 3" or 1000 hour fuels will be a variety of age classes (green to decaying). Therefore, they will have a range of fuel moistures and a range of combustion. In the larger size material 15 tons per acre tends to be less biomass than a lay person would guess. Leaving 15 ton/per acre of 3+ inch fuels on the forest floor is a minimal amount of fuels that have a low risk of contributing to wildland fire initiation and spread. These materials are important for maintaining wildlife habitat components and soil productivity. For more discussion of fuel loading see the Fire and Fuels Analysis in Chapter 3 and Ea pp. 8-9.

Implementation Related Comments

> **Comment:** Due to seasonal restrictions a purchaser would have to make multiple entries in a years time. Include this cost in the appraisal process.
> **Letter & Comment #: 13-4**

Response: Noted for consideration during the preparation phase for the timber sale contract.

Inventoried Roadles Related Comments

Comment: Specify which section of the Final Rule applies and why the proposal fits. Cite harvest units/acres involved and associated road construction or reconstruction.
Letter & Comment #: 1-1, 16-4, 20-5, 23-8

Response:
No road construction or reconstruction is proposed in either Alternative in the Inventoried Roadless Area (IRA).

See page 83 in Chapter 3 of the EA. Exception category 1(ii) from the Roadless Final Rule (2001) applies to units 1 (35 ac in IRA) and 2 (220 ac. In IRA) in alternative 2. Category 1 (ii) would apply to unit 2 (220 Ac. in IRA) in Alternative 3, the selected Alternative. These units currently retain their roadless character. Unit 1 in Alternative 3 is outside of the IRA.

(1) The cutting or sale or removal of generally small diameter is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics. (ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce uncharacteristic wildfire effects…

The treatment proposed in unit 2 is designed to reduce ladder and surface fuels to lessen uncharacteristic fire effects from long term fire suppression and lack of surface fires. Over time, surface fires can be thought of as maintenance fires that in effect, thin or remove ladder and surface fuels. The understory thin proposed in unit 2 is limited to "generally small diameter trees" focusing removal on trees less than six inches in diameter. The treatment would result in desirable ecosystem characteristics of reducing uncharacteristic wildfire effects in the wildland urban interface as discussed in the purpose and need for action.(EA Chapter 1) Design criteria were incorporated in the Alternatives to limit effects to the roadless characteristics. (EA, p. 40) With the inclusion of design criteria, and the lighthanded treatment proposed, there would be no lasting effects to roadless character.(EA. P. 86-92)

Exception category 4 applies to units 13 (estimated 25 ac. in IRA), 14 (estimated 75 ac.in IRA) and 15 (75 ac. in IRA) in both Alternatives. (b) Timber may be cut, sold or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. (4) Roadless characteristics have been substantially altered in a portion of an inventoried roadless area due to the construction of a classified road and subsequent timber harvest. The portions of units 13-15 that are in the inventoried roadless have been previously roaded and harvested and no longer retain their inherent roadless characteristics. (EA p. 80-92)

The perimeter of Unit 14 was altered in the decision to eliminate a portion of the acres in the IRA due to some implementation feasibility concerns. The remaining acres in the IRA were measured in arcview. With the removal of about 5 acres there is 59 acres of unit 14 in the IRA.

Comment: Which rule applies to slash and burn (no commercial logging) within IRA's?
Letter & Comment #: 1-2

Response: The Roadless Final Rule, published in 2001 provides the current Agency direction. See 36 CFR 294. Among other things, the rule addresses when timber can be cut, sold and removed from the IRA. There is no direction that limits prescribed burning in the IRA.

Comment: IRA/Lynx – Discuss degradation of lynx habitat in context with managing ecological conditions.
Letter & Comment #: 1-3

Response: All project alternatives would be in compliance with direction for lynx habitat management from the Northern Rockies Lynx Amendment. (EA, pp. 92-95 and Biological Assessment.(Pils, 2008)

Prey availability, especially snowshoe hares, appears to be a primary limiting factor for lynx in the Northern Rockies. The main cause of lynx mortality is starvation (USDA Forest Service 2007*a*, page 141). Therefore, lynx habitat conservation measures are currently focused on maintaining adequate quantities of winter showshoe hare habitat. Approximately 175 acres of snowshoe hare habitat would be altered to unsuitable condition by pre-commercial, commercial, and understory thinning. (EA, pp. 92-94, Biological Assessment, Pils 2008) Since these acres are not in the IRA and they are a very minor in extent, the ecological conditions in the IRA are not influenced in a meaningful way.

There is a difference between the estimate of acres affected in EA, Chapter 3 and the selected alternative in the Biological Assessment. Approximately 50 acres of suitable snow shoe hare habitat was removed from units in the selected alternatives. Only 0.3% of the allowable acres of fuels treatments in lynx habitat at the Forest level would occur which is well within the new limits of the new Forest Plan direction. (Biological Assessment, Pils 2008)

Comment: Discuss current status of Forest Service Road that will be used to log within the IRA in unit 14. What maintenance is planned on the road portion that lies within the IRA?
Letter & Comment #: 1-4

Response:
The existing road in unit 14 in the IRA is very well established and will need very little maintenance to be suitable for log trucks. At this time it is suitable for passenger cars. The road may need a light blading and minimal vegetation clearing.

In general, existing roads that are planned to be used that are grown-in will be opened up by removal of vegetation within about 8 feet of centerline each side. Surface will only be

improved to safely accommodate log trucks, typically a light grading to remove rocks and stumps. Live streams will be crossed with temporary culverts. Approaches to main roads will be improved to accommodate log truck turning radius (50-feet). Following the use, these roads closed by draining, ripping, seeding, and slashing.

Because the road in the IRA near unit 14 is a project road according to the Gallatin Travel Management Plan Decision (10/2006) we would have an opportunity to close the road during implementation of Lonesome Wood if receipts are available.

> **Comment:** It is paramount that inventoried roadless area is left untouched so they are eligible for future wilderness designation. Even with Alternative 3, there are still more temporary roads proposed that I find acceptable.
> **Letter & Comment #: 9-4**

Response: No road construction or reconstruction is proposed in the inventoried roadless area. There is no harvest, fuel treatment or proposed road construction proposed within the Lionhead Recommended Wilderness portion of this roadless area.

None of the project area is recommended wilderness in the current forest plan, nor has any of the project area been included in draft wilderness legislation for Montana in the last several decades. There would be no irretrievable or irreversible commitment of resources which would eliminate the possibility of the roadless area to be designated as wilderness at some future date. In the selected Alternative, unit 2 is the only unit within the IRA that retains roadless characteristics and the treatment would not preclude future designation as wilderness. (EA p. 89)

> **Comment:** Limiting tree removal to 8" dbh or less in the IRA would not reduce fire hazard effectively.
> **Letter & Comment #: 13-2**

Response: The design features referenced (EA, pp. 40) apply to small tree thinning in unit 2 and in Alternative 2, the portion of unit 1 in the IRA. The identified treatment and mitigation for unit 2 focuses biomass removal on smaller trees that are the ladder fuel component of the fuel strata. It is the surface and ladder fuels the support fire initiation and spread from the surface to the crowns. The intensity in which these fuels burn, is a major factor in whether a crown fire is sustained or drops to the surface. Opening up the canopy of the forest contributes to reducing fire hazard and spread, whether thinning trees with a diameter of 3 inches or 24 inches. Reducing or breaking up the continuity of the fuels prevents wildland fire starts, high rates of spread and intensity. Cleaning up dead and down fuel and ladder fuel reduction reduces the risk of wildland fire moving into the canopy or crowns slows fire rates of spread and intensity

For this unit, ladder and surface fuels are the most important to reduce because they are the most continuous. Also the overstory or forest canopy is not as continuous in unit 2 due to the extensive mortality associated with Douglas fir beetle. It would be ideal to remove large biomass but the ground is very steep, over 40% slope in much of the unit

and a large percentage of the large trees are decayed beyond commercial value. Hence, there is no known technology that is reasonable to implement from a cost and capability standpoint to remove large rotten trees from steep slopes.

For this unit, limiting tree removal to material less than 8" in diameter is a reasonable trade-off. In fact, it is unlikely we would be able to remove these large trees in any quantity anyway. The mitigation would have more influence on the effectiveness of the treatment in Alternative 2 for the portion of unit 2 in the IRA. However, Alternative 2 was not selected.

> **Comment:** Camouflaging stumps is an unnecessary cost.
> **Letter & Comment #: 13-3**

Response: Minor work to camouflage harvest activities within roadless is necessary to allow these sorts of activities to occur, while preserving the roadless character and natural appearing landscape within these areas. This work is concentrated in areas most likely to be frequented by recreationists, and is not applied across the board in lightly traveled portions of roadless units. This mitigation helps to maintain all of the roadless characteristics.

> **Comment:** Clarify status of logging in unit 1 and no road building in the IRA. Clarify what activity in unit 14 is in the IRA.
> **Letter & Comment #: 18-1, 18-6**

Response: Clarification of activity in the Inventoried Roadless Area (IRA)
One of the issues that drove the development of Alternative 3 was concern for logging in the IRA in lands that retain their roadless characteristics, especially unit 1 (Alternative 2).

For the Selected Alternative, the activities in the IRA include:

Unit 1- No activity is planned in the IRA. The boundary of unit 1 was altered to avoid logging in the portion of the IRA that retains roadless characteristics.
Unit 2 – 220 acres of small tree thinning followed by pile or jackpot burning in the IRA. Between Alternative 2 and 3 there were slight changes in the unit boundary, in which the net acreage is the same even with the inclusion of a portion of unit 1 from Alternative 2.
Unit 13 – 18 acres slashing and prescribed burning in the IRA.
Unit 14 – 59 acres of logging in the IRA. During implementation the existing road in the IRA would be used for landing, skidding, log haul, administrative purposes and could be closed with project receipts.
Unit 15 – 75 acres of small tree thin followed by pile or jackpot burning.

No road construction or reconstruction is proposed in the IRA.

> **Comment:** Oppose continued activity in the IRA that may further degrade the area's roadless character, specifically unit 14. Encourage restorative activities.

Do not compromise the integrity of the IRA and therefore request that a different treatment be considered in unit 14. Consider prescribed burning and precommercial thinning in instead of logging to avoid impacts to roadless character.
Letter & Comment #: 18-2, 18-3

Response: The small portion of unit 14 which is technically located within the IRA is completely surrounded by past harvest activity, road construction and other development. The management prescription for this area from the Forest Plan emphasizes timber production and grizzly bear habitat management. Due to the actual condition of the lands within the vicinity of unit 14, and the level of past manipulation, this area no longer maintains many inherent roadless characteristics, nor is it contiguous with a larger tract of roadless land that is intact. You request that we "not compromise the integrity of the IRA" - those effects have already occurred. Exception category (4) from the 2001 Roadless Final rule was specifically designed to recognize that there are mapping inconsistencies within the published IRA boundaries, where areas that no longer retain their roadless character have been included within the mapped IRA boundary, and specifically allow continued management activities within these areas. This is one of those places, and we feel it is appropriate to allow continued vegetation management projects, without risking any "compromise" to roadless character which is already foregone.

While unit 14 has a desirable natural setting, the area does not retain roadless characteristics and a majority of the unit is outside the IRA. In the decision, 59 acres remain in the IRA in unit 14. The remaining 146 acres are outside the IRA. As with all treatment units, many restoration activities will be incorporated in the treatments for unit 14 as described in the EA pp. 37-44.

According to the fuels analysis, the existing fuel conditions in unit 14, would support active crown fire with spotting distances of up to 1.2 miles. Fire intensity, flame length and predicted rate of fire spread would be very dangerous and would pose a serious risk to firefighters and property. In the event of a wildfire, there are several properties that would be at risk, as well as forest users trying to evacuate from points north and west of unit 14. In order to achieve the purpose and need, crown canopy fuels need to be reduced along with ladder and surface fuels in this unit. (EA, p. 58-75)

Road Management

Comment: Fully analyze how temporary roads are going to be managed and how use of these roads will be enforced so they do not become system roads in the future
Letter & Comment #: 18-4

Response: Temporary roads will be constructed to minimum standards to accommodate log trucks with no public traffic. Roads will be fully drained, ripped, slashed, and seeded, to return the road to adjacent vegetation management goals. Approaches to the main road will be fully re-contoured to prevent access. These roads will not be placed on the

system of roads as part of this project. If appropriate, natural barriers are placed at the junction with the existing travel corridor to discourage use of the restored road.

During administration of the project, travel on temporary roads is limited to administrative use. If trespass on the roads becomes a problem, the road can be barricaded or gated. Also area closures could be implemented to provide more enforcement authority if needed. In reality, the temporary roads will not be open for extended periods because the season of operation is so limited and purchasers will be required to make road impassable if the need for the road extends from one operating season to another. We will work with our contractors to complete work in a unit and restore the road prior to the end of the operating season.

> **Comment:** Clearly Outline how the temporary roads will be decommissioned or restored to ensure no lasting environmental impacts in the area.
> **Letter & Comment #: 18-5**

Response: Following use, roads will be fully drained, ripped to remove any compaction, slashed sufficiently to aid in revegetation, and seeded to minimize surface erosion and out compete invasive weeds. Any temporary culverts will be removed and the natural drainage geometry restored. See the Soils Restoration Design Criteria on EA, PP.. 42 and Invasive Weed Features EA, pp. 39 for addition restoration measures.

Wildlife

Grizzly Bear

> **Comment:** Does the grizzly bear amendment that has replaced the FP standards for the bear also eliminate MA objectives and goals for grizzly bear? Define what is the current MA direction in MA13 relative to Grizzly?
> **Letter & Comment #: 1-5**

Response: The direction for grizzly bear habitat management in MA 13 from the 1987 Gallatin Forest Plan is applicable. The grizzly bear report was amended to include a discussion of this direction. The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

> **Comment:** With an increase in grizzly bear mortality risk why is this project consistent with MA 13 direction?
> **Letter & Comment #: 1-6**

Response: The amended grizzly bear analysis report discusses the MA 13 goal for grizzly bear mortality risk and why all project alternatives would be in compliance with this goal. The analysis concluded that there would be very low potential for increased grizzly bear mortality resulting from any project alternative. (Pils 2007 amended 3/2008)

Comment: Discuss why construction of new roads and opening closed roads for logging in MA 13 is consistent with managing grizzly bear mortality risk?
Letter & Comment #: 1-7

Response: Only a portion of the project would occur within MA 13. The amended grizzly bear report analyzed the effects of project alternatives on grizzly bears in all MA's, including the potential for increased mortality as a result of changes in motorized access. Motorized access standards from the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests were developed to ensure that a recovered population of grizzly bears is sustained in the Yellowstone Area. All project alternatives would be in compliance with these standards. The amended grizzly bear report concluded that the potential for increased grizzly bear mortality would be very low because the changes in motorized access values would be very small in magnitude and temporary in duration. The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

Comment: Relative to removal of road and activity restrictions from 32% of the PCA in the Grizzly Bear Amendment, you need to complete a complete cumulative effects analysis of the FP amendment for Grizzly bears for the Gallatin Forest before implementing site specific projects.
Letter & Comment #: 1-11

Response: : It is unclear what the commenter is referring to when stating that the grizzly bear 6-Forest plan amendment has removed road and activity restrictions within 32% of the Primary Conservation Area (PCA). The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests contains standards for managing motorized access along with rules for projects affecting secure habitat (permanently or temporarily) across the entire (PCA). The EIS for the Forest Plan Amendment analyzed the direct, indirect, and cumulative effects analysis of access standards and application rules on grizzly bears across the PCA, including those portions located on the Gallatin National Forest. Therefore, a cumulative effects analysis of the Grizzly Bear Forest Plan Amendment for the Gallatin National Forest is not necessary. Grizzly Bear Forest Plan Amendment direction for specific to motorized access and temporary changes in secure habitat was discussed in the Lonesome Wood EA (Appendix A, page 44). All project alternatives were determined to be in compliance with this direction (Appendix A, page 45-47). The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

Comment: Due to removal of road restrictions from the Travel Plan, need cumulative effects analysis of FP amendment before implementation of Lonesome Wood.
Letter & Comment #: 1-12

Response: It is unclear what the commenter is referring to when stating that the recent Gallatin National Forest Travel Plan removed road restrictions within over half a million

acres of management areas on the Forest. The Travel Plan decision was in compliance with all management direction for grizzly bear habitat at the time (including Forest Plan Amendment 19) as well as current direction (The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests). It also maintained or increased grizzly bear secure habitat throughout that portion of the PCA located on the Gallatin National Forest. The direct, indirect, and cumulative effects of the Travel Plan decision on grizzly bears were analyzed across the Forest in the Travel Plan FEIS.(GNF 2006) Therefore, no further analysis of the cumulative effects of the Travel Plan needs to be conducted prior to implementing the Lonesome Wood Project.

> **Comment:** Define current open road density in the project area, total road density within the project area, open road density during implementation.
> **Letter & Comment #: 1-13**

Response: The EA (Appendix A, page 45) discloses that there would be a temporary increase in Total Motorized Access Route Density (TMARD) of approximately 1.0% within the Henry's Lake #2 Bear Management Subunit under Alternatives 2 and 3. The EA also disclosed that no public motorized use of temporary roads constructed for this project would be allowed (page 44), and that as a result there would be no increase in Open Motorized Access Route Density (OMARD) (Appendix A, page 45). The analysis concluded that the project would be in compliance with applicable Forest Plan access standards, and that the 1.0% increase in TMARD would have very limited effects upon grizzly bears.

Motorized access values for grizzly bear habitat in the PCA are calculated and tracked at the BMS scale rather than at the project scale (see amended grizzly bear report). TMARD values for the Henry's Lake #2 BMS under all project alternatives were disclosed in the EA (Appendix A, page 47, Table 1). OMARD values were not displayed because they would not change under any alternative and were therefore not relevant. The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

> **Comment:** Open road density will not change during logging because there would be no public access. Which category of road is this where there is motorized use but no effect to grizzly bear?
> **Letter & Comment #: 1-14**

Response: The grizzly bear report was amended to include a discussion on how TMARD and OMARD are calculated, and to clarify how the temporary roads proposed for this project were considered in the analysis. The effects of temporary roads on grizzly bears, including their effects on secure habitat, OMARD, and TMARD, were evaluated in the EA (Appendix A, 45-47).

> **Comment:** Provide a grizzly bear secure habitat map and define acres involved. Define how many acres to be removed from security during implementation. Define how long security areas have been in place.

Letter & Comment #: 1-15

Response: Grizzly bear secure habitat within the Henry's Lake #2 BMS (which includes the project area) is displayed for each project alternative in Figures 1, 2, and 3 of the amended grizzly bear habitat report. The amended grizzly bear report discusses temporary reductions in secure habitat by acres for Alternatives 2 and 3. As a result of a modeling error, the EA incorrectly reported that there would be a temporary reduction in secure habitat of 0.1% within the Henry's Lake #2 BMS. The actual reduction in secure habitat under this alternative would be the same as for alternative 3 (see amended grizzly bear report), or less than the amount reported in the EA. Secure habitat depicted in Figures 1, 2, and 3 of the amended grizzly bear habitat report was part of the 1998 baseline for the Henry's Lake #2 BMS, and has therefore been in existence for at least 10 years. The requested maps and acres involved were sent to the commenter in response to a Freedom of Information Act (FOIA) request which was submitted at about the same time as the comment letter. The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

Comment: How will the 3 year project limitation in security habitat be achieved
Letter & Comment #: 1-16

Response: The EA discussed application rules for temporary reductions in secure habitat from the Forest Plan Amendment for Grizzly Bear Habitat Conservation (Appendix A, page 44). One of the application rules discussed in the EA is that projects must be implemented within 3 years to qualify as temporary. These application rules address temporary changes in secure habitat, and therefore were applied only to project elements affecting secure habitat rather than to the project as a whole. The amended grizzly bear report (Pils 2007 amended 3/2008) discusses temporary reductions in secure habitat under Alternatives 2 and 3 and how the application rules for temporary reductions in secure habitat would be applied to ensure that the project would be in compliance with Forest Plan Amendment direction. As discussed in the amended grizzly bear report, the temporary roads planned for Units 11 and 21 in Alternatives 2 and 3 are the only elements of the project affecting secure habitat where the 3 year limitation on implementation would be applied. Other project activities would not be subject to the 3 year limitation on implementation. Therefore, the duration of the overall project could be 8-12 years while still complying with the Forest Plan Amendment. The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

Comment: Why isn't a project that will not only increase open road densities, but increase human activities within this subunit considered a significant activity? What criteria are used to measure project impacts if not motorized access?
Letter & Comment #: 1-17

Response: Motorized access direction from the Forest Plan Amendment for Grizzly Bear Habitat Conservation was based upon the most current and best available science,

and was prepared to ensure that a recovered population of grizzly bears will be maintained in the Yellowstone Area while providing for a variety of land management activities (such as the ones proposed with this project). All project alternatives were determined to be in compliance with this direction (see the amended grizzly bear report).

The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008) The amended grizzly bear report also concluded that the overall effects of the project on grizzly bear habitat, including changes in motorized access as well as alteration of vegetation, would be very limited. The determination that the effects of project alternatives on grizzly bear habitat were not significant was based on all of this information.

> **Comment:** There is no mitigation for grizzly bear habitat loss. What level of habitat loss to this species of concern is required before it is significant from a a project area, landscape and Forest Perspective? Why is it allowable to degrade habitat in the Grizzly Bear Recovery Zone?
> **Letter & Comment #:** 1-18, 16-5, 17-2, 20-6

Response: The amended grizzly bear report discusses mitigation measures for grizzly bear habitat. These were designed to ensure compliance with Forest Plan direction. The amended grizzly bear report also disclosed that there would be increased potential for grizzly bears to be displaced from the project area as a result of the project. The basis for determining that the potential displacement of bears resulting from project activities was not significant was the conclusion that adequate high-quality secure habitat would still be available adjacent to the project within the same BMS and the fact that all project alternatives would be in compliance with Forest Plan direction for secure habitat.
The appropriate scale for analyzing such effects is the Bear Management Subunit, not the project area or Forest level. The amended grizzly report disclosed that the Forest Plan Amendment, which contains the most current guidance based on the best available science, focuses on providing secure habitat for grizzly bears due to its overriding importance relative to areas compromised by motorized access (or "habitat in general" as suggested by the commenter). That is why the analysis placed emphasis on the effects of the project on grizzly bear secure habitat. The amended report is included in Appendix C for reference. The Biological Evaluation was amended to include these changes. (Pils 2007 amended 3/2008)

> **Comment:** Clarify whether the Grizzly Bear Forest Plan Amendment supersedes all Gallatin FP standards related to Grizzly Bear. The Amendment refers only to the 1986 Guidelines. Does the remaining direction, including FP Amendment 19 still apply?
> **Letter & Comment #: 1-38**

Response: Standard A.1.a of Amendment 19 to the Gallatin Forest Plan states, "adopt Yellowstone Access standards when they become available." It then provides interim standards for access management. New access standards were developed as part of the Final Conservation Strategy for the Grizzly Bear in the Yellowstone Ecosystem in 2003.

This direction became part of the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests, which became effective in 2007 with the de-listing of the grizzly bear in the Yellowstone Ecosystem (see amended grizzly bear report). The new access standards superceded the interim standards from Gallatin Forest Plan Amendment 19 at that time.

> **Comment:** Concerned about cumulative impacts to grizzly bear habitat and increased conflicts are occurring forest wide.
> **Letter & Comment #:** 18-8

Response: Potential effects to this species' habitat would be very minor and as a result there would be no notable cumulative effects from any project alternative. This determination was made based on the fact that all project alternatives would be in compliance with the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests, which was designed to ensure the long-term conservation of grizzly bears in the Yellowstone Ecosystem. Additionally, habitat alterations would lead to minor increases in food availability and would have no effect on critical food sources.

> **Comment:** When temporary decreases in secure habitat are allowed secure habitat must be restored within one year of project completion and projects must be implemented within 3 years to be considered temporary.
> **Letter & Comment #:** 18-9

Response: The application rules for temporary decreases in secure habitat under the Forest Plan Amendment for Grizzly Bear Habitat Conservation were discussed in the EA (appendix A, page 44) and are included in the description of the selected alternative in my decision, including the requirements for restoring secure habitat within 1 year of project completion and the 3 year limitation on temporary projects. See response to comment 1-16 and the amended grizzly bear report in Appendix C for an explanation of how the project would meet these requirements.

<u>Moose</u>

> **Comment:** Since a considerable amount of moose winter range will be eliminated with this proposal in MA13, how does this comply with MA direction?
> **Letter & Comment #: 1-9**

Response: The Moose Report was amended (Pils 2007e amended 3/2008) to include more of a discussion of compliance with the MA 13 standard. It concluded that all alternatives would be in compliance with this standard. It points out that all habitat alterations, whether natural or anthropogenic, result in positive effects to some species and negative effects to others. For this project, while there would be adverse effects to late winter moose habitat, the aspen restoration component of the project would improve habitat quality for deer, elk, and many other wildlife species as well as moose outside of the late winter period.

Comment: No specific analysis as to how much winter range for moose existing in the project area prior to timber harvest that removed old growth winter range. Agency failed to demonstrate that cumulative losses of moose winter range are not currently significant, in which case means that additional losses will also be significant. This issue seems to require completion of an EIS in regards to moose habitat. Habitat reduction for moose violates the validity provision of the NFMA

Letter & Comment #: 1-10, 15-1

Response: The cumulative effects of past timber harvest on moose winter range were analyzed (see EA, page 78). The analysis concluded that the viability of this moose population would not be threatened by any project alternative, and points out that moose are a relatively common species that are hunted throughout western Montana and the Greater Yellowstone Area (see EA, page 78 and amended Moose Report (Pils 2007e amended 3/2008). This was the basis for the determination that the project's effects would not be significant and would not require the preparation of an EIS. The amended Moose Analysis Report is in Appendix C.

Comment: Concerned with further reduction of moose habitat given population decline and population validity.
Letter & Comment #: 16-1, 17-1, 20-2

Response: These comment's reference to the "Validity provision of the National Forest Management Act" is unclear. The Forest Service is unaware of any such "validity provision". If the actual intent of the comments was to reference the *viability* provision of the National Forest Management Act, this issue was discussed in the response to comments 1-10 and 15-1, along with project compliance with MA 13 standards.

The EA disclosed that moose are present in the project area and that the evidence currently points towards a decreasing trend for this population. It also acknowledged that the proposed treatments will further reduce available winter habitat for moose (EA, pages 75-80).

The Selected Alternative (DN, pp. 12) eliminated treatment on approximately 80 acres of moose winter habitat bringing the total amount of winter habitat impacted to approximately 9% further reducing the potential impacts.

Comment: Request FS to continue to work with MDFWP to monitor moose populations and moose winter habitat as project moves forward.
Letter & Comment #: 18-7

Response: Montana Fish, Wildlife, & Parks is the agency responsible for management of moose and other big game populations in the state of Montana, including on National Forest lands. Part of their management program includes monitoring and development of objectives for many big game populations. However, there is no moose population estimate for this area as no surveys have been conducted in recent years, and no

population objective has been developed. Moose are typically much more difficult to survey for than most other big game species in Montana because they spend considerable time in heavily forested areas where they are difficult to observe from the air.

While no specific monitoring of moose populations or habitat is planned for this project following implementation, the Forest Service would continue to coordinate with Montana Fish, Wildlife, & Parks on the habitat and population management of big game including moose.

Snags

Comment: Does Gallatin have a MIS for snags?

Letter & Comment #: 1-23

Response: The Gallatin Forest Plan does not have a Management Indicator Species for snags. Management Indicator Species (MIS) were selected in the Forest Plan for several important habitats, but due to the large diversity in habitats found across the Forest it is not feasible to monitor an MIS representative of each type of habitat.

Comment: What is being used to measure project impacts on snag associated wildlife?

Letter & Comment #: 1-24

Response: The Biodiversity Report (Pils 2008a) in Appendix C discusses the effects of this project on snag habitat and snag-dependent species. Additionally, the EA disclosed that standards for management of snags and dead and downed woody material from Forest Plan Amendment #15 (see EA, page 15) would be met under all project alternatives.

Comment: What criteria are you applying to the project to determine that snag associated wildlife will not be significantly impacted?

Letter & Comment #: 1-28

Response: To clarify, Forest Plan Amendment #15 does specify a minimum number of snags/acre to be retained in harvest units (see response to comment 1-25).

The Biodiversity Report (Pils 2008a) in Appendix C discussed the effects of this project on snag habitat and snag-dependent species. It discussed the current status of snag habitat, and concluded that due to recent insect and disease activity, snag habitat is abundant in the project area and at larger scales. The EA disclosed that standards for management of snags and dead and downed woody material from Forest Plan Amendment #15 (see EA, page 15) would be met under all project alternatives. These standards were designed specifically to meet the needs of snag-associated wildlife. The EA prepared for Forest Plan Amendment #15 concluded that the standards would "maintain habitat for snag using and cavity nesting species and dead and down debris using species in harvested areas (USDA Forest Service 1993)." The Forest Service believes this is still a valid conclusion. Based on all of this information, the biodiversity report concluded that the effects of the project on snag associated wildlife would be minor.

Trumpeter Swan

Comment: Winter logging would displace trumpeter swans or other migratory birds. They do use Hebgen Lake. What are the effects?

Letter & Comment #: 15-3, 16-9, 17-4, 19-3, 20-10

Response: Swans use portions of Hebgen Lake extensively during the winter, including some areas directly adjacent to the project area. However, all alternatives contain a mitigation measure precluding project activities in moose winter range from December 1-May 1. This would apply to all units in proximity to the lakeshore where trumpeter swans could potentially be disturbed. This mitigation would effectively prevent effects on wintering trumpeter swans. Therefore, the proposed action would have ***no impact*** on this species. These points were clarified in the amended Biological Evaluation (Pils 2007 amended 3/2008).

Great Gray Owl

Comment: Include mitigation to protect the great gray owl nest and surrounding area in unit 17 or 18.

Letter & Comment #: 9-2, 12-2

Response: The Forest Service understands that there was a great gray owl nest in the Watkins Creek area, but that this nest was located outside of units 17 and 18. A comment was received during the scoping phase of the project stating that, "in 2006 there was an active Great Gray Owl nest along the trail to Coffin Lake near unit 17." This comment indicated that the Great Grey Owl nest was *outside* of the proposed treatment unit. The Coffin Lake Trail is approximately 0.75 miles from unit 17 and approximately 1 mile from unit 18. Additionally, units 17 and 18 were inventoried during goshawk nesting surveys on 6/12/2006, and although surveys were not designed specifically for this species, the units were thoroughly walked by wildlife technicians and no great gray owl nests were noted. The information available to the Forest Service indicates that this great gray owl territory was located outside of treatment units and would not be subject to habitat alteration.

Additionally, unit 17 has timing restrictions specifying that harvest would not occur when soils were wet in the spring and from June 14-Labor Day. Effectively, there would be no harvest in this unit during the nesting season so disturbance from logging activities would not be an issue. No logging is proposed in unit 18. Therefore, no further mitigation would be necessary to protect this nest site. The specialist report on migratory birds analyzed the effects of the project on great gray owls and included a discussion of this nest site (see EA, Appendix A pages 56-59).

Management Indicator Species

Comment: Are you doing management for species indicated by goshawk? What is the strategy for managing this suite of wildlife? Effects to nesting and rearing areas for Goshawk.

Letter & Comment #: 1-34, 15-4, 15-5, 16-2, 17-5, 20-3

Response: The EA disclosed that modeling of goshawk habitat in the project area was conducted, and that no suitable goshawk habitat was identified. Field surveys conducted within proposed treatment units failed to detect goshawk nesting territories. Survey results are in the project file. Therefore, no specific mitigation measures would be applied unless goshawk territories are identified sometime prior to or during project implementation.

Additionally, the EA notes that goshawk typically select late successional stands for nesting, and that this type of habitat is abundant and well distributed at the Forest and Regional scales. The report on Biodiversity (Pils 2008a) in Appendix C disclosed that Forest Plan standards for old growth would be met in compartment 710. Compartment 709 currently does not meet the 30% standard for old growth, but no treatment of old growth is proposed in this compartment. Based on this information, the biodiversity report concluded that availability of habitat would be assured for old growth associated wildlife at multiple scales.

Comment: How much old growth in the project area qualifies as Douglas fir-old growth for the goshawk? How is the old growth being designed to ensure viability of the suite of wildlife species indicated by old growth?

Effect on old growth dependent species from the loss of old growth habitat.

Letter & Comment #: 1-35

Response: Old growth is tracked at the timber compartment scale rather than the project scale. Approximately 1,785 acres of Douglas-fir old growth are present in compartments 709 and 710. Compliance with Forest Plan old growth standards would assure the continued availability of old growth habitat in the project area. See also response to comment 1-34 for a discussion of the effects of the project on old growth associated species at multiple scales and why these effects were determined to be minor.

Comment: Was there coordination between resources for managing the 30% old growth standards and species indicated by goshawk? What were the results?

Letter & Comment #: 1-36,

Response: Compliance with Forest Plan old growth standards would assure the continued availability of old growth habitat in the project area. (Novak 2007 amended 3/2008) See also response to comment 1-34 for a discussion of the effects of the project on old growth associated species at multiple scales and why these effects were determined to be minor.

The purpose and need for the project does not include active management of old growth or habitat for wildlife species with similar habitat requirements as old growth. The purpose and need is limited to fuel reduction and aspen maintenance. There was interdisciplinary coordination during alternative development relative to the avoidance of old growth habitat. Old growth stands in compartment 709 were removed from the proposal. (EA, pp. 39) In Alternative 3 some moose habitat, that is also old growth

habitat, was removed from the treatments. (EA, pp. 32) A discussion about potential impacts to old growth is in EA, Appendix A, pp. 38-40. The Forested Vegetation Report was amended in response to comments. In compartment 710, after treatment approximately 40% of the forested lands will remain old growth which is well in excess of the 30% old growth standard. (Novak 2007 amended 3/2008)

Comment: What are the direct and cumulative impacts on black-backed woodpecker? Define suitable habitat prior to the onset of logging in the project area and how much would remain after implementation. What criteria are being used to measure habitat losses?

Letter & Comment #: 1-37

Response: The effects of the project on this species were considered in the Biological Evaluation (EA, pages 52-54). Potential effects to this species' habitat would be very minor and as a result, there would be notable additive cumulative effects from any project alternative. This determination was made based on the following information: no salvage harvest of burned areas would occur, and burned areas are by far the most important habitat for this species. There are some stands with light to moderate infestations of bark beetles. Project activities could reduce the amount of bark beetle infested trees in the project area. However, this would have no measurable effect on the availability of beetle-infested trees to black-backed woodpeckers given the large amount of bark beetle activity currently occuring at the District, Forest, and Regional levels. Additionally, snag retention standards from Forest Plan Amendment #15 would be met, which would help retain the limited habitat value of proposed treatments units for this species.

Comment: What are impacts to bison? Logging may disturb migrating bison.
Letter & Comment #: 15-2, 16-3, 17-3, 19-2, 20-4

Response: Bison in the project area would be managed under direction from the Interagency Bison Management Plan (IBMP). The project area falls within a bison management area known as Zone 3, where bison are not tolerated at any time of year due to disease management concerns. Any departure from the IBMP is beyond the scope of this project.

Even if bison were tolerated in the project area, forested habitats such as those proposed for treatment are of little or no value as bison habitat due to this species' preference for open rangelands. Additionally, no project activities would be allowed from December 1-May 1 (see EA, page 44), therefore there would be no potential for disturbance from winter logging. There would be no effect on bison habitat as a result. For these numerous reasons, there was no need to include a discussion of the effects of the project on bison.

Comment: This project will adversely impact hunting opportunities in the GNF.
Letter & Comment #: 20-13

Response: Population level effects to game animals that would affect hunting opportunity are not expected to occur under any project alternative, with the exception of moose. Moose currently provide only a minimal amount of hunting opportunity in the project area (3 permits allocated annually, see EA pages 75-76).

Old Growth/Snags

Comment: Which logging units remove old growth forest? Define both the type and acres of old growth involved.
Letter & Comment #: 1-19

Response: Units 1, 2, 5, 6, 10, 11, 14 and 15 thin to some amount old growth. Of the 422 acres of old growth in compartment 710 planned for thinning, 265 acres thin in Douglas-fir forest, 98 acres thin in subalpine fir forest, 46 acres thin in lodgepole pine forest and 14 acres thin in a mixed stand of Douglas-fir and lodgepole pine forest. There was a discussion of Old Growth in the EA, Appendix A, pp. 38-40, that information was updated in the Amended Forest Vegetation Report with information needs raised during the Comment Period. A math error was discovered while doing further analysis and the increase in impacted acres in compartment 710 is reflected in this response. (Novak 2007 amended 3/2008)

Comment: Define management area prescription for each acre of old growth to be logged.
Letter & Comment #: 1-20

Response: Management Area 13 (lands available for timber harvest provided grizzly bear habitat objectives are met) lands within the project area within old growth stands of coniferous forest to be thinned total 232 acres. Management Area 5 (maintain and improve wildlife habitat values and the natural attractiveness of these areas to provide opportunities for public enjoyment and safety and allow a level of timber harvest consistent with the above direction for MA 5) lands within the project area within old growth stands of coniferous forest planned for thinning total 152 acres. Management Area 15 (meet grizzly bear mortality reduction goals , manage vegetation to provide habitat for recovery of the bear, provide forage for livestock and dispersed recreation opportunities consistent with the number one goal being grizzly bear health) lands within the project area within old growth stands of coniferous forest planned for thinning total 39 acres.

Comment: Clarify old growth acres based on forest acres versus entire compartment acres relative to MA 13. Define old growth management requirements.
Letter & Comment #: 1-21

Response: The amount of old growth calculated for this report consistently uses forested acres and not total acres (which includes rock, water, shrubs, etc.). Contrary to the assertion that old growth is to be calculated in MA 13 using all acres within a timber

compartment (and not forest acres) the Forest Plan states: "Maintain a minimum of 30% of each timber compartment in old growth emphasizing by priority Douglas-fir, whitebark pine, and wet subalpine fir community types". No mention is made to "entire compartment".

> **Comment:** Fail to analyze the effect of this reduction on the specific amount of old growth habitat within compartment 710 even though the old growth calculated is above the Forest Plan standard of 30% in grizzly bear country.
> **Letter & Comment #: 16-2**

Response: The effects analysis in the wildlife section takes into account all changes to vegetation from the thinning in this area and not just to old growth forest to the wildlife of concern. The analysis includes direct, indirect and cumulative effects from thinning in both compartments 709 and 710. The Forested Vegetation Report includes a discussion of potential effects to old growth habitat and is summarized in EA, Appendix A, pp. 38-40. The old growth information was amended in response to comments. (Novak 2007 amended 3/2008) The new information is also disclosed in the responses herein.

> **Comment:** Which harvest units require snags post treatment? Which will not require snags?
> **Letter & Comment #: 1-25**

Response: No unit will "require" snags after harvest because based on field review and stand exams, all units will exceed the Forest Plan standard of 30 snags per 10 acres (over 10" in diameter at breast height, see GNF Forest Plan Amendment No.15—Snag Management Direction).

Snag retention requirements are a Forest Plan standard specific to units with commercial harvest. Measures to ensure snag retention are generally incorporated in harvest prescription and marking guidelines.

> **Comment:** What is the expected decrease in larger snags with commercial thinning? How do you know that thinned stands will still provide 3 10" snags per acre after logging?
> **Letter & Comment #: 1-26**

Response: The expected decrease in larger snags will of course vary depending on the amount of snags present and their exact placement. We will leave as many snags as safety will permit, but will at a minimum leave 30 snags per 10 acres greater than 10" dbh to comply with the Gallatin's Forest Plan Standard where such snag numbers exist. On another note, it should be pointed out that because we are leaving nearly 50% of the existing stand after thinning, we would expect these harvested areas to not only provide the minimum Forest Plan Standard for snags, but also provide more than the minimum number of snags over time as insects and disease kill some of the leave trees.

Comment: What is the cumulative impact of past logging on snags and is it significant?
Letter & Comment #: 1-27

Response: Based on a broad-scale look (by Ranger District and Madison mountain range using FIA derived data) presently the number of snags per acre greater than or equal to 10" dbh is around 12 per acre in the Madison mountain range and around 11 per acre for the entire Hebgen Lake Ranger District. Based on field reviews and stand exams the two timber compartments (709 and 710) where the analysis occurs has a considerable number of snags (at least greater than the 30 snags per 10 acres exceeding 10"dbh as per the GNF Forest Plan direction----Amendment No.15).

Because of the above snag numbers, it appears that past logging throughout the area has not been significant in reducing snags below the Forest Plan standard. Additionally, as fire and insects continue to kill trees snag numbers will increase. Presently, the area has recently experienced an outbreak of Douglas fir beetle which has killed hundreds of mature Douglas fir trees in and around this area and in 2007 a wildfire burned thousands of trees in the flats near West Yellowstone also contributing to increasing snag numbers.

Comment: What area of land is the FP snag direction measured over?
Letter & Comment #: 1-29

Response: The standard is directed at only those areas where timber harvest is planned. The direction is not specific to a broad scale view that would encompass thousands of acres.

Comment: Does the current condition of snags meet FP standard? How was this determined?
Letter & Comment #: 1-30

Response: Based on the information provided in response 1-27, the estimated numbers of snags present in the proposed units and the number to be left after harvest per the silvicultural prescription (and the fact we are leaving 50% of the existing stand after harvest) the current and future snag condition for the project area will meet the Gallatin's FP standard as described above.

Watershed Protection/Fisheries

Comment: More mitigation is needed to protect watershed from sedimentations.

No trees will be cut within 15 feet of any Class 1 or Class 2 stream segment. This definition appears to arbitrarily define the limits of any wetland or riparian area on the ground without recognizing the extent of the area.
Letter & Comment #: 9-3, 12-2. 23-2, 23-6

Response: The presentation of design features common to action alternatives appears to have caused some confusion. An effort will be made in the Decision Notice to present mitigation and design criteria more clearly.

Watershed and riparian protection measures occurred throughout all phases of this project. During project design, several treatment units were either altered or dropped as a result of these concerns. For example, a portion treatment unit 17 was dropped in Alternative 3 to avoid any chance of sediment delivery to Watkins Creek which is considered an impaired water body by the State of Montana with sediment being one of the contributing pollutants. Proposed temporary roads were also located in areas to avoid stream channel crossings. No commercial treatment (removal of merchantable materials such as sawlogs, house logs, post and poles, etc.) will occur within 50 feet of any intermittent or perennial stream channel, with the exception of two treatment units. The two exceptions include a perennial non-fish bearing stream where the treatment was designed to enhance aspen, while the second is an intermittent stream channel that flows directly into Hebgen Reservoir. The acres within the SMZ in those units are subject to the restrictions outlined in this response and in the Decision Notice. There were several other areas were treatment unit boundaries were modified to maintain watershed and riparian resources.

Watershed protections identified in the EA include design features/mitigation measures listed in the EA on Page 38 under Aquatics Protection and Page 43 under Water Quality & Riparian. The State of Montana Streamside Management Zone (SMZ) compliance rules (DNRC 2006), and Soil and Water Best Management Practices (DNRC 2004) are incorporated by reference EA pp. 43 and Appendix B. All of those protections are described as part of the design of Alternatives 2 and 3 and are incorporated in the decision.

The SMZ compliance rules, although not individually stated in this EA, were designed by the State of Montana to protect riparian and watershed resources during commercial timber harvest operations. The key word here is commercial. Although not required, SMZ compliance rules would also be implemented during this project to protect riparian and watershed resources within non-commercial treatment units. In some cases, the proposed mitigation measures listed below are more restrictive than SMZ compliance rules such as a 15 foot no cut zone along stream channels. The following is a list of required rules and mitigation measures to be applied along streams and riparian areas reducing or eliminating sediment delivery:

<u>Individual Streamside Management Zone Compliance Rules regarding Commercial Timber Harvest. These practices are required under Montana Law.</u>

1. Equipment operation would be prohibited within the 50 foot wide SMZ's. There are no known areas within this project area where SMZ's would be extended to 100 feet because of 35% slope. The three exceptions to this rule are not applicable under Alternatives 2 and 3.
2. SMZ boundaries would be clearly marked along on all stream segments.

3. Trees cut and removed within the 50 foot wide SMZ would be directionally felled and pulled out. There are no known areas within this project area where trees would be fully suspended across stream segments.
4. Bank-edge trees would be favored. See below for a more stringent mitigation measure.
5. Trees leaning toward streams would be favored. See below for a more stringent mitigation measure.
6. Sub-merchantable trees and shrubs would be retained and protected to the fullest extent possible.
7. Hardwoods and snags may be counted toward the retention tree requirements in approximately the same proportion as in the pre-harvest stand.
8. For Class 2 streams, retain at least 50% of trees greater than or equal to 8 inches DBH on each side of stream or 5 trees per 100 foot segment, whichever is greater. Note: Proposed buffers adjacent to fish bearing Class1 streams exceed what is required by SMZ compliance rules.
9. All trees that have fallen, through natural processes, across or in a Class 1 or 2 stream must be retained.

<u>Proposed Project Mitigations (Some are more restrictive than Streamside Management Zone Compliance Rules) designed specific to the Lonesome Wood PRoejct.</u>

1. No trees would be cut within 15 feet of the Ordinary High Water Mark along any fish bearing Class 1 or Class 2 stream segment within commercial and non-commercial treatment units. Removal of lower branches (or ladder fuels) of larger trees within this 15 foot no cut zone would be allowed if removal would not result in mortality to that tree. This mitigation measure is designed to protect streambanks, provide thermal regulation overhead cover, augment debris recruitment, and reduce or prevent sediment delivery.
2. The fisheries biologist would be allowed the descretion to widen the 15 foot no cut zone to insure stream bank stability in a rare situation where 15 feet was deemed inadequate. This mitigation measure was added after the EA was sent out for review.
3. Retain all bank-edge trees maintaining stable stream banks and trees leaning toward streams that can provide large woody debris within commercial and non-commercial treatment units.
4. A fisheries biologist would be present during marking of all commerical or non-commerical treatment unit boundaries adjacent to streams and marking of leaning leave trees outside the 15 foot no cut zone.
5. Standard Forest Service timber sale protection provisions would be applied to the commercial harvest activities to protect against soil erosion and sedimentation.
6. Standard Best Management Practices or BMP's (DNRC 2002) including Montana SMZ compliance rules (DNRC 2006) would be applied during design and implementation of all commercial and non-commerical activities. Of particular importance is drainage and slashing of skids trails upon unit completion. The State of Montana requires that BMP's be applied to all activities to comply with

State Water Quality standards. Those sections are hereby incorporated by reference into this EA, as well as State of Montana Forestry BMP's (Appendix B).

7. Seeps and springs are perennially saturated, while most of the streamside areas are only seasonally saturated (usually during snowmelt runoff). These areas would be avoided in any ground disturbing activities in the Lonesome Wood project. Spring sources in some of the treatment units serve private and Recreation Residences in Clarks Springs, Rumbaugh, Cozy Corners, and Lonesomehurst. The area within 100' of the spring source areas would be avoided in any ground disturbing activities (skidding or harvesting) to protect these domestic water supply source areas. In addition no surface disturbance would be allowed within 25' of pipelines and water distributions systems.
8. Additional spring sources used by wildlife in the Rumbaugh, Cozy Corners, and Romsett areas, and the area within 50' of these springs would be avoided in ground disturbing activities.

Comment: Violates the Clean Water Act in Watkins Creek.

Watkins Creek is 303d listed stream-making sediment increase illegal.

No impact analysis on the effects of more rapid snow melt due to openings created by commercial thinning or equivalent Clear Cut acres.
Letter & Comment #: 15-7, 15-8, 16-8, 20-8, 20-9

Response: As mentioned on page 34 in Appendix A, Other Issues, Watkins Creek is listed on the 2006 Montana DEQ 303(d) list as an impaired stream segment only partially meeting aquatic and coldwater fishery and swimming. In Alternative 3 no Lonesome Wood project harvest activity or sedimentation would occur in the Watkins Creek drainage. The Water Quality Report was modified to document that increased water yield or accelerated snow melt from the Lonesome Wood is too low to pose a measurable water yield increase or hydrograph timing change and was not analyzed in detail. (Story 2007a amended 3/2008)

Comment: Model used to assess increased sediment increase does not include grazing and mining (EA, Appendix A, pp.11). This violates the requirement to include cumulative impacts of all past, present and reasonably foreseeable actions.
Letter & Comment #: 16-6, 20-7

Response: Potential sediment yield was modeled for five project drainages (West Denny, Cherry, Rumbaugh, Watkins, and Trapper) using the R1R4 sediment model (Cline et. al. 1981). When run in cumulative mode, this model does not take into account of impacts from grazing and mining. Mining does not occur within anyone of these five previously mentioned drainages. Livestock grazing only occurs in one of the five that being the Watkins Creek drainage. The impacts of livestock grazing are covered in the water quality cumulative effects check off sheet included in the project file with the Water Quality Report. (Story 2007a amended 3/2008).

Watkins Creek is considered as an impaired stream by the State of Montana with sediment and dewatering being considered as contributing pollutants. Because of this special designation, fuels reduction treatments were scaled back from Alternative 2 in this drainage to the no sediment effect in Mitigated Alternative 3. Treatment units in this drainage were scaled back to insure no project generated sediment would reach Watkins Creek. As a result, this project would not further exacerbate the current situation meaning there would be no direct, indirect or cumulative impacts.

> **Comment:** Request that the language in design features relative to the 15' not cut buffer be improved to allow flexibility to the Fish biologist if needed to expand the buffer.
> **Letter & Comment #:23-2**

Response: This clarification was incorporated in the Decision and is discussed in response to comment on Watershed and Fisheries beginning on page 25.

> **Comment:** Removal of 50-60% of trees in all diameter classes seems to be excessive in riparian areas and wetlands. Is it appropriate to allow skidding equipment in these sensitive areas?
> **Letter & Comment #: 23-2**

Response: See response above beginning on page 25. A 15 foot no cut zone would be implemented along all stream channels. This can be expanded by the District fisheries biologist if deemed necessary to aquatic resources. Outside this 15 foot no cut zone but within the designated streamside management zone, up to 50 percent of the trees can be removed according to State of Montana Streamside Management Zone compliance rules (DNRC 2006). The fisheries biologist would be present during marking to insure trees leaning towards the stream would be retained.

> **Comment**: Wouldn't it be appropriate to recognize aquatic resources, particularly water quality, as a significant issue?
> **Letter & Comment #: 23-3**

Response: Potential adverse effects to water quality and fish habitat were avoided in the planning phase of this project. This occurred during all phases of the project planning including project design, for example, moving boundaries away from streams, and with the incorporation of design features/mitigation (EA, pp. 38, 43) such as Best Management Practices (BMP's) for Forestry in Montana (2004) and the Streamside Management Zone (SMZ) compliance rules (2006).

The NEPA provides for the identification and elimination from detailed study those issues which are not significant or have been covered by prior environmental review, thus narrowing the discussion of those issues to a brief statement as to why they would not have a significant effect on the human environment or by providing reference to their coverage elsewhere. (40 CFR 1501.7(3). Both the Forest Hydrologist and the Zone Fisheries Biologist determined that the project as designed would protect the water and fisheries resource and would not have a significant effect on the human environment. (EA, pp. A 11-12, 35-38, Roberts 2007, Story 2007a amended 3/2008) As a result, in

accordance with the NEPA, these issues were not the fully discussed in Chapter 3. A synopsis of the supporting analysis as to why the project would not have a significant effect on the human environment is in the EA, Appendix A.

The Forest Hydrologist determined that the Lonesome Wood Vegetation Management Project area would be in compliance with the Montana Water Quality Act and Administrative Rules of Montana, WQLS/TMDL constraints, and with Gallatin NF Forest Plan direction for water quality protection. Sediment modeling indicates that project sediment changes are low-moderate and well within the Gallatin NF sediment guidelines. (Story 2007a amended 3/2008)

Hand helicopter thinning has very limited potential to increase sediment due to minimal ground disturbance. Pile burns typically consume the duff and upper soil horizon more deeply than understory burns and take longer for re-vegetation. However, the piles are surrounded by unburned areas, which act to contain erosion to the area of the pile. Spring rains in the proposed treatment areas are typically frontal storms of low intensity as opposed to summer storms which although usually less overall precipitation, are convective driven with cells of high intensity. Actual areas of erosion and sediment delivery within the Lonesome Wood Vegetation Management Project area expected to be minor and very localized -- primarily in areas where more intensive storms impact treated areas before revegetation occurs.

Erosion and sediment increase from the mechanized ground based treatments and timber removal could result from skid trails, log yarding, landings, and piling disturbance. These effects were evaluated for the both alternatives using the R1R4 sediment model which was run in a cumulative fashion accounting for all existing roads, timber harvesting, residential, and recreational developments in Lonesome Wood Vegetation Management Project area. The model was run assuming fuel treatments understory burns, temporary road construction, and timber harvest was done in a 3 year period (2008 to 2010). Sediment levels are projected to decline to or below pre-project levels by 2015. The projected sediment effects are only marginally measurable and too low to pose adverse physical or biological effects. None of the treatments are expected to have significant sediment changes.

With the design features in the action alternatives including incorporation of BMP's and SMZ practices, as well as other mitigation, there would be no adverse effect on floodplains or wetlands due to minimal ground disturbance.

The Zone Fisheries Biologist determined that both Alternative 2 and Alternative 3 are consistent with all Applicable Laws, Regulations, Policy and Forest Direction to protect fish and fish habitat, including Management Indicator Species and Sensitive Species. (Robert 2007) Fish habitat will be protected through careful design and application of the design features outlined in the Decision Notice pp. 23-24 and clarified in the Response to Comments beginning on page A-30.

Comment: Why is there a difference in protection requirements for domestic vs wildlife springs? Both areas should be recognized as wetlands and have the same level of protection.
Comment & Letter #: 23-7

Response: As explained in Appendix A, page 34 all of the springs and adjacent source areas are protected by the Wetland Executive Order (11990) and are avoided in ground disturbing activities. During scoping, some homeowners whose domestic water source was in proposed units, expressed concern for protection of their water supply and associated infrastructure. (GNF 2007a, Scoping Content Analysis) In deference to those homeowners, additional protections were incorporated in the Alternatives (EA pp. 43) and are included in the Decision. Domestic springs, which provide water for private and recreation residences for human consumption, are of particular concern hence the 100' no disturbance buffer. The 25' buffer was designed to avoid disturbance to any of the adjacent spring structures or pipelines. The 50' buffer from other springs (used by wildlife) was intended primarily to avoid ground disturbance which could adversely affect the wetlands, in accordance with the Wetlands Executive Order (11990), with no additional structure protection requirements.

Comment: Chapter 3, page 102 of the EA references specific streamside mitigation protection in the EA, Section 2.4.3.2. The section does not indicate any specific mitigation or protection measures for stream sides. How will they be dealt with?
Comment & letter #: 23-9

Response – Along with the measures on the EA, page 38 under Aquatic Protection, there are additional measures identified on page 43 under Water Quality and Riparian. In the decision notice the aquatic, riparian and water quality protections will be combined so the protections are easier to distinguish. A few other commenters had the impression there were minimal or no protections for watershed, aquatic and riparian resources. See the response to comment beginning on page 25 for a summary of Watershed and Fisheries protection measures. These features are incorporated in the decision.

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