

SMITH CREEK VEGETATION TREATMENT PROJECT

Decision Notice & FONSI

**Gallatin National Forest
Livingston Ranger District
Meagher County, Montana**

December 2007

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USDA Forest Service

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I. Introduction

This Decision Notice documents my decision and the “finding of no significant impact” (FONSI) concerning the implementation of a hazardous fuel reduction/vegetation treatment project on National Forest System lands in the Smith Creek drainage of the Livingston Ranger District. The Project Area has been identified as a wildland/urban interface area by the Park County Community Wildfire Protection Plan (2006).

The analysis area for the project is located in the Crazy Mountains along the northeast corner of the Livingston Ranger District, approximately 35 miles north of Livingston, Montana. It is bordered on the west and south by the Gallatin National Forest boundary, private lands, and by the Lewis & Clark National Forest boundary to the north and east. The approximately 23,000 acre analysis area consists of the WUI boundary as defined by the Park County CWFP. The analysis area consists of a mixture of National Forest System (NFS) and interspersed private lands. See Vicinity Map (M-1) and Activity Area Overview Map (M-2).

The project area, located in T5N, R9E, Section 1 & T5N, R10E, Sections 4, 6, & 8, consists of the portions of the Smith Creek WUI that are in the closest proximity to residences, other structures, and primary transportation routes. The communities at risk are located in Sections 5, 6, and 7 of T5N, R.10E. Numerous private residences are located within the project area, many of which are located along the Smith Creek Road #991. The largest concentration of residences (approximately 30) within the forest boundary is the Smith Creek subdivision. These residences are a combination of summer cabins and year round residences, which have been identified as a community at risk from wildfire by the recently completed Shields River Watershed Risk Assessment (USFS 2005a) and Park County Community Wildfire Protection Plan. The reasons for the high fire risk rating include limited access and heavy fuel loadings, both along the travel routes and within/adjacent to the subdivision.

II. Decision

After careful consideration of the impacts of the alternatives disclosed in the Smith Creek Vegetation Treatment Project Environmental Assessment (EA), August 2007, I have selected Alternative 3 (Proposed Action & Meadow Creek Burn) for implementation. In summary, this alternative would mechanically thin and/or hand-treat vegetation on up to approximately 810 acres, and conduct prescribed burning on an additional 300 acres. This proposal was developed by identifying “at risk” areas containing high fuel hazard ratings relative to improving public and firefighter safety, as well as identifying key portions of Smith Creek and the East Fork of Smith Creek roads that are currently contributing sediment to these creeks. Stands of trees with high potential for stand replacement fire to affect lives and property in this WUI area were included for treatment. Stands where vegetation treatments would maintain and/or improve wildlife habitat (meadows, Douglas-fir stands, aspen), and/or reduce susceptibility to existing and future insect and disease outbreaks were also considered to be high priority.

Mechanized equipment would not be allowed within Streamside Management Zones or wet areas (unless frozen) in conformance with the State of Montana Best Management Practices (BMP’s) as outlined in Appendix B.

No new permanent or temporary roads would be constructed. Existing project roads and trails (roads that were used for past logging activities and/or trails being used for motorized vehicles) would be utilized. Some of these project roads and trails (#7110 & #7110E) would need to be reopened to provide access to treatment units (See the EA, Table A-24, pp. A-103 thru A-109). Reopened project roads and trails that are located on National Forest System lands would be closed to the public during project related activities and permanently closed and rehabilitated following harvest and post-harvest activities. Rehabilitation would make these roads and/or trails impassable for future motorized travel. Old skid trails (located in proposed Units B, D & G) that have re-vegetated would have coarse woody debris scattered on them to deter ATV usage and provide additional nutrients for soils.

Three road treatment packages for maintaining/improving roads within the project area are proposed (See EA, Table A-24, pp. A-103 through A-109 for detailed descriptions). Road Treatment A would be completed during/following implementation of harvest related activities. Road Treatments B & C would be completed to the extent that funds, (from the sale of timber products) are available. For locations of proposed road treatments see Map M-6.

III. Background

B. John Losensky completed a fire history study in 1993 (See Project File) that focused on the west slope of the Crazy Mountains on the Livingston Ranger District. Losensky reached conclusions that wildfires in most or all of the Crazy Mountains were not uncommon. Data suggests that major portions were impacted by fire in 1849, 1855 and 1863, which was the last major fire. Many of these fires probably began in the valley grasslands and moved upslope into the forested lands.

Recent human activity has influenced the historic role fire has played on the Crazy Mountain landscape. A wide variety of land management practices have occurred within the project vicinity. Some private grasslands are irrigated, farmed, and grazed and some of the timbered areas have been logged. National Forest System lands contain numerous roads, dispersed recreation areas and trailheads, suitable timber areas, and grazing allotments. This all leads to a very diverse landscape, resulting in a complex management area. In addition, fire suppression has been very successful in this area. Fires that historically would have grown to large sizes have been suppressed shortly after ignition. Recent fires in or near the Analysis Area include the 1994 Smith Creek fire, which burnt 1,000 acres and the 2000 Sugarloaf fire, which burnt 400 acres, and the 2003 Slippery Rock fire, which burnt 1,072 acres.

In May of 2005, the Shields River Watershed Risk Assessment (WRA), USFS 2005 was completed by the Forest Service. The Smith-Shields WRA was a landscape level assessment, evaluating approximately 44,000 acres in the Smith Creek and Shields River drainages for the risks to natural resources from different levels of predicted 50-year vegetative changes, caused primarily by wildfire and forest insects. The team of Forest Service resource specialists that conducted the analysis considered existing, historical, and projected future landscape conditions and weighed these considerations with current Forest Plan management direction and current and potential social settings. A primary component of this WRA process was data outputs generated

by the SIMPPLLE model (SIMulating Patterns and Processes at Landscape ScaLEs). SIMPPLLE attempts to simulate vegetative changes to landscapes over time using pathways for stand development and natural disturbances. Multiple runs containing random variables were used to identify a range of vegetative conditions and natural disturbances (least, average and most) that might be expected for a given landscape. Using a series of multiple simulations (40), 50 years into the future and one “average” view of historic conditions, resource specialists, provided a coarse assessment of risk to individual resources. The Smith-Shields WRA was a landscape level assessment of the risk to natural resources from different levels of predicted 50-year vegetative changes caused primarily by wildfire and forest insects. The findings of this WRA were used to assist in determining whether or not natural resources are at risk, and whether or not vegetative manipulation opportunities exist to reduce perceived risks.

Once opportunities were identified using the WRA process, the District Ranger formed an Interdisciplinary Team (IDT) to validate the findings/opportunities with more intensive field reconnaissance and analysis. Upon validation, a Project Initiation Letter was sent by the District Ranger to members of the IDT in January of 2006 asking them to begin work on developing a “proposed action” and start the analysis (NEPA) process. The letter also outlined the need for using a collaborative and integrated approach in order to make improvements for a variety of resources, and clearly stated the expectations that there would be a substantial amount of public involvement associated with the planning process.

The analysis concluded that there were high risk natural fuel levels and limited access (“one-way-in” and “one-way-out”) in the Smith Creek (23,200 acre) WUI area. These conditions (fuel levels and limited access) create unsafe conditions for the public and firefighters. The WRA also identified as risks, modifications in wildlife habitat including increasing tree densities of Douglas-fir; and decreases in aspen and meadow habitats due to encroaching conifer trees. Another risk identified was the steadily increasing susceptibility of forested stands to bark beetle attacks due to tree stand densities.

The Park County Community Wildfire Protection Plan (CWPP), completed in the spring of 2006, identified the Smith Creek area as a priority “WUI area at high risk” from wildfire and a priority for fuels reduction projects. Although the majority of the residences are just outside of the Park County line in Meagher County, these areas have access or response issues that warrant Park County to take an active role assisting in their protection. A copy of the wildfire protection plan can be found in the Project File.

Collaboration with the public, private landowners, recreationists, and other interested parties has been important in the development of the Smith Creek Vegetation Treatment Project. The proposal was developed with input from adjacent private homeowners, as well as state, county, and local officials. Public meetings and field trips have been held, with the Forest Service providing information and updates regarding the proposed project on National Forest System lands. A meeting with Forest Service officials and the Economic Development Coordinator for the Resource Conservation and Development Center (RC&D) was held to inform the public about the availability of and how to apply for funds through grants, to be used for fuel reduction activities in the Smith Creek WUI on adjacent private lands. To date, several private landowners are participating in the RC&D/County grant program and several additional residences are currently being evaluated. Collaboration, such as that described above, is anticipated to continue for the duration of the project.

IV. Purpose and Need for Action

The purpose and need for this integrated vegetation treatment project is as follows:

- To modify potential wildfire behavior by creating vegetation and fuel conditions that provide for safer firefighter response and public evacuation in the event of a wildland fire.
- To improve wildlife habitat diversity by maintaining meadow and aspen areas, and decreasing tree densities in Douglas-fir stands, thus creating open park-like stands.
- To decrease tree densities in the WUI adjacent to private lands, so that the remaining trees are less susceptible to future insect and disease infestations.

Note: My decision (Alternative 3) includes vegetation treatments only on National Forest System (NFS) lands. Private landowners are responsible for fuels reduction treatments and structure protection measures on privately owned property.

In addition to the primary purpose and need for the project, there are opportunities, as identified in the second project scoping (9/29/2006), to provide benefits to water quality and fish habitat for Yellowstone cutthroat trout by improving drainage and surfacing on project area roads that are adjacent to creeks. Outside funding was obtained for the maintenance of problem areas (sediment sources) on these roads in the summer of 2007 (to be completed by August 2008), prior to any project activity (See Map M-5). These road treatments are necessary to reduce sediment introduction into the adjacent creeks whether or not the vegetation project is implemented, thus would not be considered a connected action (40 CFR 1508.25) to the project. The opportunity to fund this road maintenance was elevated because the area was in the planning stages for a vegetation treatment project. Additional road maintenance treatments to further improve drainage and surface conditions on the Smith Creek Road and the East Fork of Smith Creek Road (Road Treatments B & C, Table A-24, Map M-6) are included as a part of this project. A complete description of the various road treatments is outlined on pp. 1-6 & 1-7.

The following ecosystem restoration activities are also proposed:

- Placement of woody debris on old skid trails previously utilized for harvest activity to deter ATV usage and provide nutrients for soils.
- Aspen exclosures and/or fencing, if needed, to protect aspen regeneration.
- A toilet facility at the ATV parking area.

V. Scope of the Decision

The Council of Environmental Quality (CEQ) regulations implementing NEPA define the “scope” of an action consisting of “...the range of actions, alternatives, and impacts to be considered”. To determine the scope, federal agencies shall consider three types of actions; (1) connected actions; which are two or more actions that are dependent on each other for their utility; (2) cumulative actions; which when viewed with other proposed actions may have cumulatively significant effects and therefore be analyzed together; and (3) similar actions; which when viewed with other reasonably foreseeable or proposed actions have similarities that provide a basis for evaluating their environmental consequences together. (40 CFR 1508.25).

The scope of the proposed vegetative treatment actions addressed in this EA are limited to stand density reduction and the reduction of fuel loadings on National Forest Land including:

- Thinning and/or harvest of medium and large diameter (>6” dbh) green conifers to meet unit objectives
- Harvest of insect or disease damaged/killed conifers except where needed to meet snag retention requirements.
- Thinning of Post & Pole size green conifers (4” to 6” dbh)
- Slashing of small diameter conifers
- Harvesting and/or slashing of conifers encroaching into meadows and aspen stands.
- Piling and removing and/or burning of downed woody materials and fuels resulting from treatment actions.
- Prescribed burning in the Meadow Creek area (Unit J) is included in Alternative 3.

Other actions that are within the scope of the project that would be completed are cleanup and maintenance of project area roads (Described on pp. 1-6 & 1-7 and in detail in the EA, Table A-24, pp. A-103 through A-109 & Map M-6) and ecosystem restoration activities including weed monitoring and spraying, aspen monitoring and protection measures, placement of woody debris on approximately four miles of previously utilized skid trails, and rehabilitation of user created ATV trails within the Project Area.

Other ecosystem restoration items that may be completed if funding allows, include additional road maintenance (surfacing of portions of Smith Creek and East Fork of Smith Creek roads), aspen fencing, and a toilet at the ATV parking area at the junction of roads #991 and #7710.

VI. Detailed Description of the Decision

Alternative 3-Proposed Action & Meadow Creek Burn (Selected Alternative)

Based on information provided in the EA and Project File, I have concluded that Alternative 3 (Selected Alternative) best addresses all elements of the purpose and need for the project. This alternative was developed considering the areas of high fuel hazard, high risk of human-caused ignition, and high social values. Alternative 3 emphasizes treating those stands where thinning and reduction of conifer encroachment would improve public and firefighter safety, would maintain and/or improve wildlife habitat by reducing meadow encroachment, creating open park-like Douglas-fir stands, enhancing aspen regeneration, and/or would reduce the risk of insect and disease outbreaks. All harvest units associated with Alternative 3 lie on National Forest System lands to be administered as Management Area 8 (timber) with some units having linear inclusions of Management Area 7 (riparian), both of which allow for commercial timber management in the Gallatin Forest Plan. Unit J, which consists of a 300 acre prescribed burn in the Meadow Creek area would have firefighter and public safety benefits, would improve wildlife habitat through the reduction of ladder fuels in open Douglas fir stands and would reduce conifer encroachment, thus increasing the integrity of grassland/park habitats.

Pre-activity road maintenance treatments (not part of this decision) to improve drainage and reduce sediment concerns on Smith Creek Road (#991), East Fork of Smith Creek Road (#6635), and Goat Mountain Road (#6636) are in the process of completion in the project area and will be completed by August 2008, prior to implementation of any project-related activities.

Ecosystem restoration activities that would be completed with implementation of Alternative 3 include Road Treatment A, clean-up and blading of roads utilized for harvest activities (See Table A-24, A-103 through A-109, Map M-6), hand treatments (thinning and slash removal), mechanical treatment of non-merchantable fuels in units, aspen regeneration monitoring, noxious weed monitoring and treatments, and placement of woody debris on old skid roads and entrances to user-created ATV trails where they intersect system trails or roads.

If additional funds are available from the value of timber products once the above-mentioned activities are completed, other ecosystem restoration activities that would be implemented include some or all of Road Treatments B & C (See EA, Table A-24, A-103 through A-109, Map M-6), aspen exclosures and/or fencing (if needed to protect regeneration), and a toilet facility at the ATV parking area.

Map M-5 displays the units of treatment associated with Alternative 3 (Selected Alternative). My decision includes vegetation treatments on a maximum of 810 acres in ten separate units. Stand density reduction utilizing ground-based harvest equipment would occur on a maximum of 435 acres on slopes up to 35%, harvesting both large and small diameter trees. A maximum of 145 acres of thinning/density reduction on slopes >35% would utilize helicopter logging, and approximately 230 acres would consist of hand-treatments (removal of ladder fuels, limbing of large diameter trees, and thinning of small diameter trees).

Hand-treatments would occur in sensitive areas (riparian), areas where trees are too small for commercial harvest operations, and in some units after commercial harvest operations have been completed. Leave tree spacing would be highly variable between units and consist of a mixture of patches of multi-storied trees as well as open-spaced individual trees. This irregular stand structure would break the continuity of vertical and horizontal fuels among individual trees. Prescriptions would vary between adjacent units to disrupt the continuity of fuel conditions among stands.

Prescriptions for aspen stands (Units A1 & G) would remove approximately 85% of the conifers while leaving approximately 15% of the healthiest conifers in clumps or individually (where wind-firm and greater than 100 feet from aspen clumps). All aspen would be retained. Small diameter trees and activity fuels would be slashed, piled and burned, or otherwise removed as forest products, with a maximum of 15 tons/acre of downed woody debris left on average in each treatment unit. Additional aspen enhancement opportunities exist in Units B & D where all conifers will be removed within 100 feet of aspen clones.

Prescriptions for the proposed treatment units included in the Selected Alternative can be found in Table 1 below: Table 1 displays individual unit information including approximate acres, objectives for the unit, proposed treatments, and mitigation needed to protect resources. Design criteria and mitigation measures for the units can be found in the EA, pp. 2-30 through 2-39.

Normal operating period for mechanical harvest, skidding, and mechanical slash piling would be from November 1 to April 30 over frozen ground and/or 8 inches of snow in units using ground-based equipment. Units utilizing helicopter harvesting and/or hand-treatment would not be restricted to the winter months (See design criteria and mitigation EA, pp. 2-30 through 2-39). Hand or helicopter treatments would not be conducted in any of the proposed vegetation units during archery season (beginning 9/1 through 10/15) to accommodate the concentrated elk migration in the area. Exceptions to this restriction would only occur after consultation with Montana Fish, Wildlife, and Parks.

Harvest and skidding activities must be completed on a given unit within one season, unless extreme weather conditions prohibit completion. Log hauling for all units would occur over dry or frozen roads to minimize damage to roads and address sediment concerns. Mechanized equipment would not be allowed within Streamside Management Zones or wet areas in conformance with the State of Montana Best Management Practices (BMP's) and the Trout Unlimited Agreement.

Within commercially harvested units, up to 15 tons per acre of coarse, downed woody material on average would be maintained in each treatment unit where available. Activity created slash in excess of 15 tons per acre would be piled and burned. Burning would only occur during the spring (April/June) and fall (late September/November) seasons.

No new road construction is proposed (permanent or temporary) with my decision. Existing roads on both private and National Forest lands would be used to access the treatment units. One of the key factors in determining the use of existing roads on private lands is whether permission to use the roads can be obtained. Existing roads on either ownership would require maintenance to support safe and efficient use, consistent with project design criteria and mitigations. Existing project roads and trails (roads and trails that have been utilized for

past logging activities) would also be utilized. Some of these project roads and trails would need to be reopened to provide access to treatment units (#7110 & #7110E).

Reopened project roads and trails that are located on National Forest System lands would be closed to the public during project related activities and those that are no longer needed following harvest activities would be permanently closed and rehabilitated, consistent with the recent Gallatin National Forest Travel Plan decision. Rehabilitation would make these roads and/or trails impassable for future motorized travel and would include other necessary resource protection practices. See the EA, Table A-24 for detailed road information. Existing skid roads in Units A1, B, & D would have 5 tons/acre of coarse woody debris scattered along up to four miles of old skid roads after harvest activities are completed to help improve soil quality and to deter ATV use on these trails. Designated motorized routes listed in the 2006 Gallatin National Forest Travel Plan would not be included for woody debris treatment.

Treatment in Unit J would consist of prescribed fire techniques to create a mosaic pattern within the unit. Smaller trees would be targeted, specifically in the grassland/park structures and open Douglas fir stands. In areas that lodgepole pine and sub-alpine fir dominate, passive crown fire would be expected for a short duration to mimic a mixed severity fire effect. Fuel treatment objectives for Unit J are to achieve a balance between leaving a moderate amount of material on the ground to provide nutrients for soil replenishment, but not so excessive as to add to an uncontrollable wildfire. An average of approximately 10 to 15 tons per acre of materials would be left on the ground in each unit, which would likely only support a readily controllable, low-intensity ground fire.

Past fire occurrences within the area have demonstrated that fires tend to burn more actively from the southwest to the northeast (Smith Creek Fire in 1994). The implementation of Unit J will buffer the upper reaches of the East Fork of Smith Creek and potential wildfires that could flank west around Billie Butte (Section 17) and proceed northeast into Sections 5 and 8. The implementation of Unit J would allow for a reduced fuel area that could be utilized as an anchor point for suppression strategies. In conjunction with past harvest activities, Unit J could be utilized to protect the existing road infrastructure and allow for greater amounts of time to evacuate the upper reaches of the East Fork of Smith Creek.

As apart of the burn plan, a comprehensive site specific “Risk” and “Potential Consequences” analysis are developed, which can be used to help determine overall management risk associated with the project. The “Technical Difficulty” ratings are used to facilitate the planning process and help identify prescribed fire positions and skill levels needed to safely and successfully implement the prescribed fire. The development and approval of a burn plan are the final decision criteria to implementing a prescribed fire unit. Prescribed burn plans cannot be implemented without the final signed approval of the District Ranger and can only be amended at the same level. In addition to the burn plan, the District Ranger/Agency Administrator completes a Go/No-Go Pre-Ignition Approval. This approval evaluates whether compliance requirements, prescribed fire plan elements, and internal and external notifications have been completed and expresses the Administrator’s intent to implement the prescribed fire plan. If ignition of the prescribed fire is not initiated prior to expiration date determined by the Agency Administrator, a new approval is required.

Table 1– Alternative 3 (Selected Alternative) Treatment Unit Descriptions

UNIT	ACRES	OBJECTIVE	TREATMENT	REMARKS
A1	52	Promote aspen for wildlife/biodiversity. Reduce fire severity for public and firefighter safety	Remove 85%-90% of conifers, leave healthy conifers in clumps or individuals (if wind-firm) Remove all conifers within 100' of aspen clones. Leave tree species preference: 1)DF, 2)LPP, 3)SAF, 4)ES. Leave up to 15 tons/acre down woody material >3" where available	No cutting within 15' of creek. Protect ATV trail Ground based equipment in winter
A2	15	Promote aspen for wildlife/biodiversity. Reduce fire severity for public and firefighter safety	Within 15'-100' from creek remove 75% of conifers <=8" dbh. Hand pile and burn. Favor leaving conifers that lean towards creek space 15' to 20" between crowns . Leave deciduous trees Limb leave trees 4' from the ground	No cutting within 15' of creek. Retain older/larger clumps where available. Hand Treatment
B	165	Reduce risk of high severity fire for public/firefighter safety. Enhance aspen regeneration and meadow integrity. Lower risk of mtn. pine beetle attack.	Irregular thin, 20'-25' between boles. Favor leaving DF and ES over LPP. Where aspen clones occur, remove all conifers within 100'. Post & pole areas, leave all conifers >6" dbh Pile and burn slash Leave up to 15 tons/down woody material >3" where available	Protect ATV trail Retain older/larger clumps of mostly uncut forest when encountered Ground-based equipment in winter
C	112	Improve evacuation route for public & firefighter safety. Enhance aspen regeneration/meadow integrity.	Thin/weed 20'-25' between trees >8" dbh. Trees <8" thin 10'-12' between crowns. Leave a no tree zone (3-5 acres) near junction of Smith Creek Rd and the east entrance to Sec. 6 subdivision (staging area if a wildfire occurs) Where aspen clumps occur, remove all conifers within 100'.	Hand Treatment

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UNIT	ACRES	OBJECTIVE	TREATMENT	REMARKS
D	125	<p>Reduce risk of high severity fire for public/firefighter safety.</p> <p>Enhance aspen regeneration and meadows.</p> <p>Lower risk of mtn. pine beetle.</p>	<p>Irregular thin, 20'-25' between boles. Favor leaving DF & S Where aspen clones occur, remove all conifers within 100'. Pile and burn slash Leave up to 15 tons/down woody material >3" where available.</p>	<p>Protect ATV trail</p> <p>Ground-based equipment in winter</p>
E1	34	<p>Reduce risk of mtn. pine beetle attack.</p> <p>Restore to a park-like DF stand</p>	<p>Irregular thin, 35' between boles of LP, 50' where large DF dominate. Leave trees in clumps where possible. Leave tree preference: 1)DF, 2)ES, 3)SAF, 4)LPP. Remove LPP killed by mtn pine beetle. Retain dead DF and/or LP to meet snag guidelines. Whole tree yard W ¼ of the unit adjacent to private. Leave up to 15 tons/acre woody debris >3" dbh where available</p>	<p>Buffer existing spring.</p> <p>Helicopter log</p>
E2	50	<p>Reduce risk of mtn. pine beetle attack.</p> <p>Reduce high severity fire for public/firefighter safety.</p>	<p>Irregular thin, 35' between boles of LP, 50' where large DF dominate. Leave trees in clumps where possible. Leave tree preference: 1)DF, 2)ES, 3)SAF, 4)LPP. Remove LPP killed by mtn pine beetle. Retain dead DF and/or LP to meet snag guidelines. Feather thinning along private boundary. Leave up to 15 tons/acre woody debris >3" dbh where available</p>	<p>Helicopter log</p>

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UNIT	ACRES	OBJECTIVE	TREATMENT	REMARKS
F	60	Reduce risk of mtn pine beetle attack. Reduce spread of wildfire increasing firefighter safety.	Species designate to remove all LP in irregular shaped sub-units within larger unit. Leave all species other than LP. Leave up to 15 tons/acre woody debris >3" dbh where available	Helicopter log
G	28	Reduce risk of high severity fire for public/firefighter safety. Enhance aspen regeneration for wildlife/biodiversity.	Remove majority of conifers, Retain aspen & deciduous trees (leave the wet area outside of boundary). Whole tree yard Leave up to 15 tons/down woody material >3 where available.	No cutting within 15' of creek. Ground-based Equipment in winter
H	103	Improve evacuation route for public & fire fighter safety.	Thin 20'-25' between boles. Leave species preference: 1)DF, 2)ES, 3)LPP, 4) SAF. Leave 10-15 tons/down woody material >3". Remove most of <3" dbh slash material. Thin large trees (>15-20"dbh) approx. 35' apart. Handpile and burn. All slash within 100' of road to be removed, burned, and/or piled.	Hand Treatment
I	66	Reduce risk of high severity fire for public & firefighter safety. Reduce risk of mtn. pine beetle attack.	Irregular thin Large trees (DF, LP,ES) thin approx. 35' between boles. Species preference: 1)DF, 2)ES, 3)LPP, 4)SAF. Machine pile and burn. Leave up to 15 tons/down woody material >3" where available.	Ground-based equipment in winter Harvest contingent on obtaining private access
J	300	Improve wildlife habitat (create open DF stand). Reduce ladder fuels.	Prescribe burn. Create a mosaic pattern of vegetation. Where DF dominates underburn and where LPP/SAF dominates burn passively (mixed severity fire). In openings, burn all conifers.	Leave 100' no burn zone next to Meadow Creek
Total	1110			

Road Maintenance Treatments Associated With Selected Alternative 3

Road Treatment A, clean-up and blading of system roads utilized for project related activities (Discussed in detail in the EA Table A-24, Map M-6), would occur after harvest-related activities have been completed.

All or portions of Road Treatments B and C would also be implemented and would provide benefits to fishery habitat if sufficient funding is available either from receipts generated from the harvested timber and other forest products or through other means. Road Treatments B and C would include improvements to Smith Creek Road #991, Goat Mountain Road # 6636, and East Fork Smith Creek Road #6635 to a three season standard including 6” surfacing on residential access roads and 4” spot surfacing on seasonally gated roads (See EA, Table A-24, pp. A-103 through A-109, Map M-6). These options would improve the drivability of roads in the Smith Creek drainage, especially during the spring and fall seasons when the road surfaces are soft. Current conditions (only minor surfacing) make them subject to extreme rutting (See Map M-6).

Detailed Stand Treatments Common to All Units

Described below are the stand treatments that are common to all units associated with the selected alternative (Alternative 3)

A) Aspen – Remove all conifers within and around aspen clones (individual trees sharing a common root system) for a distance of at least 100 feet. Existing aspen clones would be retained to the extent possible. Fishery mitigation to protect streams (EA, pp. 2-30 & 2-31) would have priority over treating aspen within 15 feet of stream channels. Units A & G have large concentrations of aspen clones and would have the majority of the conifers removed leaving 10-15% of the best formed, healthiest conifers in clumps. Key areas for clump retention would include trailheads, along system roads and ATV trails, wet areas, and viewsheds from adjacent private lands. Fuels resulting from the treatments would be piled and burned at the landings or away from the root systems of the remaining aspen clones. Aspen regeneration monitoring would occur following treatments for several years to determine if measures such as fencing are needed to protect aspen sprouts.

B) Fuels – Merchantable trees will be whole tree yarded and skidded to designated landings for all of the tractor units. The western portion of helicopter Unit E, a shared boundary between the National Forest and private land, (approximately 15 acres) contains existing large downed woody fuels of 15-20 tons acre. Within this area, no additional fuel accumulation would be allowed and all trees cut would be whole tree yarded to a landing for processing. The remaining portions of helicopter units E and F currently contain only light amounts of downed woody fuels. Submerchantable materials and slash from logging operations would be piled or removed from all units leaving up to 15 tons/acre of coarse woody debris, where available, on average in each unit for nutrient recycling, favoring larger diameter pieces. Coarse woody material not needed to meet downed woody debris needs would be skidded to a landing, piled and burned, piled and burned on the harvest site, or otherwise removed from the area. Aspen enhancement

units A1 & G would not have piles burned adjacent to aspen clones to protect root systems.

C) Burning – Activity fuels would be treated and burned or otherwise removed following harvest except where needed to accomplish downed woody debris/snag standards. Burning methods would include burning hand or mechanical piles, landings, and/or jackpot burning (treatment of concentrated fuels). These actions would reduce ladder and activity fuels within the treated units.

D) Tree Densities –Existing stand densities are highly variable within the units. The number of existing trees per acre varies greatly for each stand and ranges from 100 to 3000 stems per acre. On the average, approximately 300-500 irregularly spaced trees (of various sizes) per acre would be left. Portions of some of the units may be left untreated to meet a variety of resource objectives. The remaining trees will vary in size from seedlings to mature trees (six inches tall to 80 feet tall). Treatments are designed to reduce ladder fuels (small to mid-story trees and shrubs), thin the overstory to increase the space between crowns, reduce accumulations of down woody materials to levels consistent Forest Plan standards, and create healthier stand conditions.

Untreated or minimally treated portions of some stands would be left in a natural appearing condition and the trees in these groups would contribute to the total number of trees left per acre. Given these clumps, more than 500 established trees/acre would be left in portions of some units. However, 500 trees/acre is the high-end for fuels objectives for the majority of the units.

E) Snags – Forest Plan standards for snag management would be met throughout the various harvest units with the selected alternative. Commercial harvest Units E and F do not have evidence of past harvest, so retaining adequate numbers of snags would not be problematic. For Units A1, B, D, and G (units having past commercial harvest), snag surveys using fixed area plots of 37'3" radius (1/10th acre plot) were conducted. The standard specifies 30 snags per 10 acres, which equates to 3 snags per acre on average. Following are the average # snags/ acre that were found and will be retained in each of these units:

- Unit A1 - 4 snags/ acre
- Unit B - 5 snags/ acre
- Unit D - 4 snags/ acre
- Unit G - 6 snags/ acre

The remaining units would be hand-thinned, removing mostly small diameter ladder fuels and lower live limbs, so snag numbers would not be affected. A snag provision will be included in the timber contract to ensure that existing snags not currently containing mountain pine or Douglas-fir beetles will be left (pending safety concerns). The harvested units (A1, B, D, and G) will be closed to firewood cutting in order to ensure that snags remain in the treated stands after harvest activities are completed. This closure will remain in effect until monitoring indicates that replacement snags are available.

Mitigation and Monitoring

Various mitigation measures have been incorporated into my decision to reduce the probability of adverse impacts to resources from implementing Alternative 3. These mitigation measures are described in detail on (pp. 2-30 through 2-39) of the EA.

My decision also incorporates various monitoring methods (EA, pp. 2-40 through 2-42). Monitoring will be conducted and documented by various specialists and/or their staff. Monitoring results will be used to determine whether objectives are being met. Sampling frequency of the required monitoring will vary somewhat from year to year and is subject to change depending on available monitoring resources and monitoring results.

VII.

The ID Team developed and analyzed three alternatives in detail for the Smith Creek Vegetation Treatment Project. Alternative 1 is the No Action/No Treatment Alternative, Alternative 2, which includes all units and activities associated with the selected alternative (Alternative 3) except the 300 acre prescribed burn in the Meadow Creek area (Unit J).

In coming to my decision to select Alternative 3, which is fully described on (pp. 6–13) above, I also considered two other alternatives that are described below:

Alternative 1: No Action

The National Environmental Policy Act (NEPA) requires the consideration of a No Action Alternative (40 CFR 1502.14d), which provides a baseline of comparison to aid in determining the significance of issues and effects of the proposed action. Under this alternative, no vegetation treatments would occur. Vertical and horizontal fuel continuity of fuel arrangement would remain a concern in the Smith Creek WUI, threatening public and firefighter safety (EA, pp. 3-51 through 3-61).

With Alternative 1, no actions would be undertaken over the next few years that respond to the purpose and need identified on p. 4. The opportunity to reduce fuel accumulations would be deferred. No vegetative treatments would be undertaken to treat stands that are susceptible to lethal fire, insect and disease outbreaks, or for fuels management. Douglas-fir stands would contain high densities of trees, thus reducing the size of meadow and open park-like habitat on the landscape. Additional road maintenance in the Smith Creek area would be a low priority that would only likely be achieved if and when additional money became available from outside sources. Funding was recently obtained for the pre-activity maintenance on portions of the Smith Creek and East Fork of Smith Creek Roads to be completed by late August of 2008. Because the Smith Creek Project was in the planning stages, the priority for obtaining funding and timeline for completing this work was elevated. Road maintenance (Treatments A,B, & C) and other stewardship actions identified with the project would not be accomplished with the No Action Alternative. Those activities described as Reasonably Foreseeable Actions on pp. 3-5 & 3-6 would likely proceed.

Alternative 2 –Proposed Action

Alternative 2 (proposed action) includes all units and activities associated with the selected action (Alternative 3) with the exception of Unit J. Unit J, the proposed 300 acre prescribed burn in the Meadow Creek area (See Map 4), would not be implemented. The opportunity to reduce ladder fuels and conifer encroachment in Douglas fir stands in this area to increase the integrity of grassland/park habitats would be deferred. Alternative 2 would, however, respond to the majority of the purpose and need for the project as outlined on p. 4.

VI

led Study

Throughout the analysis process, a number of other alternatives were presented and explored to address certain issues. However, for one reason or another, many of these alternatives did not merit detailed analysis or further consideration in the process. The five alternatives that were considered but eliminated from detailed study are listed below and described in detail in the EA (pp. 2-43 through 2-45).

Alternative 4 – No Riparian Harvest

Alternative 5 – Defensible Space Alternative (300 foot buffer)

Alternative 6 – No Harvest in Old Growth

Alternative 7 – Increase Conifer Retention in Aspen Units A1 & G

Alternative 8 – No Mechanical Ground-based Harvest in Units Currently Exceeding Regional Soils Standards for Detrimental Disturbance.

IX. Decision Criteria

Based on a comparison of the alternatives with the three criteria described below, I have decided to implement Alternative 3 (Proposed Action & Meadow Creek burn). The criteria are:

1. Achievement of the project purpose and need as outlined on page 4 of this document.
2. Responsiveness to public comments (Decision Notice, Appendix A) and the environmental issues (EA, pp. 2-4 through 2-9) identified in association with this project.
3. Consistency with laws, regulations, and policy as described in detail on (pp. 24-33) of this Decision Notice.

The EA for this project addresses in detail the potential effects of implementing or not implementing a hazardous fuel reduction/vegetation treatment project in the Smith Creek WUI on a variety of National Forest resources for each of the alternatives considered. I conclude from this information that the predicted effects of implementing Alternative 3 are well within acceptable limits. After careful evaluation of the following decision criteria, I strongly believe that Alternative 3 best meets the purpose and need for the project, as well as the overall public interest.

1) Achievement of the Purpose and Need

Alternative 1 (No Action Alternative) would not treat the vertical and horizontal continuity of fuel arrangement in the Smith Creek WUI. No actions would be undertaken over the next few years that respond to the purpose and need for the project as identified on p. 4. The opportunity to reduce fuel accumulations would be deferred. These stands would likely increase in susceptibility to lethal wildfire and/or insect and disease outbreaks. Meadows and aspen stands would continue to shrink due to conifer encroachment. Douglas-fir stands would contain high densities of trees thus reducing open park-like habitat on the landscape. Additional road maintenance in the Smith Creek area would be a low priority that would only likely be achieved if and when additional money became available from outside sources. Alternative 1 does not respond to Forest Plan management area direction for Management Area 8 to provide for productive timber stands, optimize growing potential, optimize sustained timber production and vegetative diversity.

Alternative 2 (Proposed Action Alternative) would address and meet much of the purpose and need for the project. This alternative was developed considering the areas of high fuel hazard, high risk of human-caused ignition, and high social values. The proposed action emphasizes treating those stands where thinning and reduction of conifer encroachment would improve public and firefighter safety, maintain and/or improve wildlife habitat, enhance aspen regeneration, and those having existing insect and disease outbreaks. All harvest units associated with the proposed action would be administered as Management Area 8 (timber) with some units having linear inclusions of Management Area 7 (riparian), both of which allow for commercial timber management in the Gallatin Forest Plan.

Alternative 3 (Selected Alternative) includes all units and activities associated with Alternative 2 and adds Unit J, which consists of a 300 acre prescribed burn in the Meadow Creek area (See Map 4). Implementation of Unit J would improve wildlife habitat by reducing ladder fuels in open Douglas-fir stands and reduce conifer encroachment, thus increasing the integrity of grassland/park habitats. Unit J would help improve firefighter and public safety in the East Fork of Smith Creek in the event of a wildfire. The Selected Alternative would address and meet all aspects of the purpose and need for the project.

2) Responsiveness to Environmental Issues and Public Comments

In coming to my decision, I considered internally generated issues (Project File, Vol. 2, Chap. 5), public issues (Project File, Vol. 2, Chap. 6), the comments submitted during the scoping phase of this analysis (Project File, Vol. 2, Chap. 3), and those comments submitted during the EA comment period (Appendix A and Project File, Vol. 2, Chap. 4). The Interdisciplinary Team thoroughly studied the various issues and developed a range of alternatives and mitigation measures that addressed the most critical issues (EA, Chapter 2). I reviewed the significant environmental issues listed below and evaluated the implications of each alternative.

Water Quality: The water quality analysis is documented in the EA (pp. 3-19 through 3-30) and in the Water Quality and Fishery specialist reports (Project File, Vol. 4, Chapter 11). I thoroughly considered this information and came to the following conclusions:

With the selection of Alternative 1 (No Action Alternative), additional road maintenance and improvements would not likely occur in the Smith Creek area in the foreseeable future. There would be no increase in road sediment due to Forest Service activities, but there would be no decrease due to the lack of further road improvements (drainage, surfacing). Continuous vertical and horizontal fuel concentrations would remain throughout the WUI and the likelihood of a catastrophic wildfire adversely affecting the riparian areas would continue to increase. Catastrophic wildfire has potential to increase soil erosion, debris flows, and sediment loadings to Smith and Shields Rivers.

With Alternative 2, project activities and Road Treatment A would cause a very slight increase in sediment short term, but long-term sediment reductions would be expected. If any or all of Road Treatments B & C were implemented, significant decreases in sediment would occur long-term. Continuous vertical and horizontal fuels would be broken up and decreased in the WUI. The likelihood of a catastrophic wildfire adversely affecting the riparian areas would be decreased, also reducing the potential for additional sediment loadings to Smith and Shields Rivers.

With Alternative 3 (Selected Alternative), project activities and Road Treatment A would cause a slight increase in sediment short term, but in the long term, sediment reductions. Meadow Creek burn would create minor sediment increases short-term. If any or all of Road Treatments B & C are implemented, significant decreases in sediment would occur long-term. Continuous vertical and horizontal fuels would be broken up and decreased in the WUI. The likelihood of a catastrophic wildfire burning intensely through the riparian areas would be decreased thus reducing the potential for additional sediment loadings to both the Smith and Shields Rivers.

Fisheries: The conclusions I made after careful consideration of the effects analyses presented in the EA (pp. 3-31 through 3-52) and in the fisheries specialist report (Project File, Vol. 4, Chap. 11-7) are documented below:

With Alternative 1 (No Action Alternative), no fuel reduction activities would occur along riparian corridors. There would be no fuel reduction related impacts to riparian areas, or fish habitat. Additional road maintenance and repairs to Smith Creek roads would be uncertain due to the low priority of the area for funding.

Pre-activity road maintenance treatments (funded with special road maintenance dollars) associated with proposed Forest Service projects (Alternatives 2 & 3) will improve drainage and reduce sediment concerns on Smith Creek Road #991, East Fork of Smith Creek Road #6635, and Goat Mountain Road #6636. These treatments will be completed in August 2008 prior to harvest activities. The treatments include improving stream crossings, adding armored drainage dips, reshaping portions of the road prisms and ditches to improve drainage, and spot surfacing of problem areas. The treatments were designed to reduce runoff and the introduction of sediment into the streams.

Implementation of Alternative 2 would result in additional sediment reductions and improved spawning habitat with the implementation of Road Treatments B and/or C if sufficient funding is generated from the project or other sources. Mitigation (EA, pp. 2-30 & 2-31) ensures no adverse effects on riparian integrity or streambank stability would occur as a result of project implementation.

Alternative 3 (Selected Alternative) would also result in additional sediment reductions and improved spawning habitat due to Road Treatments B and/or C if sufficient funding is generated from the project. Mitigation (EA, pp. 2-30 & 2-31) ensures no adverse effects on riparian integrity or streambank stability would occur as a result of project implementation.

Fuels: The conclusions I made after careful consideration of the effects analyses presented in the EA (pp. 3-52 through 3-63) and in the fuels specialist report (Project File, Vol. 2, Chap. 8-1) are documented below:

With Alternative 1, forested areas within the Smith Creek WUI would continue to follow natural rates of succession, with fuels becoming denser in areas adjacent to private lands. Wind-driven wildfire would be expected to transition quickly from the

ground into the forest canopy. Risks to public and firefighter safety from wildfire would be high and would continue to increase over time without treatment of fuels.

Implementation of Alternative 2 (Proposed Action Alternative) would modify the volume and arrangement of fuels within the Smith Creek WUI. Ladder fuels and surface fuel loadings would be reduced adjacent to private lands thus reducing the likelihood of crown wildfire and providing adequate time for public evacuation. Implementation would greatly increase firefighting capabilities and safety in the WUI.

Implementation of Alternative 3 (Selected Alternative) would modify the continuous arrangement of vertical and horizontal fuels within the Smith Creek WUI. Ladder fuels and surface fuel loadings would be reduced by thinning areas adjacent to private lands, thus lowering the chances for a catastrophic crown fire in the area. Crown fire risks to adjacent private land in Section 17 would also be reduced with implementation of the Meadow Creek prescribed burn. Reducing fuels in this unit would open the area and help provide additional time for evacuation along the East Fork of Smith Road in the event of a wildfire. Alternative 3 would increase firefighting capability and safety in the WUI.

Wildlife Habitat: The wildlife habitat analysis is documented in the EA (pp. 3-63 through 3-78) and in the wildlife specialist reports (Project File, Vol. 3, Chap. 9-1). I thoroughly considered this information and came to the following conclusions:

Selection of Alternative 1 (No Action Alternative) would not improve wildlife habitat by modifying current forest structure. Meadow habitat, open Douglas-fir stands, and aspen areas would continue to decline or be lost entirely over time. The project area would continue to have a large percentage of area represented by medium age class alpine fir.

Implementation of Alternative 2 (Proposed Action Alternative) would improve habitat for species dependent on non-forested habitat groups (grassland, wet meadow, aspen, willows). The proposed thinning would result in increased foraging opportunities for big game and raptors. Late seral, single story old growth Douglas-fir stands would be increased. The medium age class alpine fir structure would be reduced in the project area. A mosaic of non-forested and forested stand structural stages would be created.

Implementation of Alternative 3 (Selected Alternative) would improve habitat for species dependent on non-forested habitat groups (grassland, wet meadow, aspen, willows). The proposed thinning would result in increased foraging opportunities for big game and raptors, as well as nesting habitat for snag dependent birds. Late seral, single story old growth DF stands would be increased. The medium age class alpine fir structure would be reduced in the project area. A mosaic of non-forested and forested stand structural stages would be created. Implementation of Meadow Creek burn would restore additional open Douglas-fir forest.

Insect and Disease: The insect and disease analysis is documented in the EA (pp. 3-79 through 3-84) and in the vegetation specialist reports (Project File, Vol. 4, Chap. 12-1). I thoroughly considered this information and came to the following conclusions:

Selection of Alternative 1 (No Action Alternative) would increase the probability of a mountain pine beetle epidemic in the Smith Creek WUI adjacent to private lands. This in turn would also increase the likelihood of numerous additional conifers to be killed, thus increasing fuels build-up. Douglas-fir beetle infestations would likely remain at current endemic levels unless an extended drought, large wildfire, or wind event occurs.

Implementation of Alternative 2 (Proposed Action Alternative) would reduce the likelihood of epidemic levels of mountain pine beetle mortality building up in the portions of the Smith Creek WUI that are immediately adjacent to private land. Thinning will remove the currently infested trees and increase the health and vigor of the remaining trees thus making them more resistant to future Mountain pine beetle attacks. Future Douglas-fir beetle infestations would likely decrease slightly in the timber compartment and Project Area due to increased vigor and open spacing of Douglas-fir. There is evidence of past Douglas-fir beetle activity but current infestations are at very low levels

Implementation of Alternative 3 (Selected Alternative) would also reduce the likelihood of epidemic levels of mountain pine beetle mortality in the Smith Creek WUI immediately adjacent to private land, similar to the implementation of Alternative 2. Thinning will increase the health and vigor of the remaining trees. The implementation timing and parameters for the Meadow Creek burn are critical to prevent future Douglas-fir beetle epidemics by preventing the scorching of numerous large Douglas-fir. Scorched trees can become stressed and are more prone to attract Douglas-fir beetles. A site specific burn plan writing process will utilize weather and fire behavior models to determine the most optimal time period (also referred to as a window) the meet the burn objectives with the lowest possible risk of escape. The models area also used to determine rates of spread, crown scorch, and tree mortality.

Soils: The soils analysis is documented in the EA (pp. 3-85 through 3-92) and in the soils specialist report (Project File, Vol. 4, Chap. 10-1). I thoroughly considered this information and came to the following conclusions:

Selection of Alternative 1 (No Action Alternative) would have no effect on soil productivity because no ground-disturbing treatments are proposed with this alternative.

Implementation of Alternative 2 (Proposed Action Alternative) would have no long-term detrimental effect on soil productivity due to effective mitigation and restoration practices. All ground-disturbing treatments adhere to Regional Soil Quality standards, including those with previous harvest.

Implementation of Alternative 3 (Selected Alternative) would have no long-term detrimental effect on soil productivity due to effective mitigation and restoration practices. All ground-disturbing treatments adhere to Regional Soil Quality standards, including those with previous harvest. Prescribed burning associated with the Meadow Creek burn unit would be low intensity and would not affect soil productivity.

Other Issues: The NEPA provides for identification and elimination from detailed study, those issues that are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere (40CFR 1501.7(3)). While I considered these issues in making my decision, they were either unaffected, mildly affected, or the effects could be adequately mitigated for all of the alternatives. An assessment of each of these issues is provided in the EA (Chapter 2-10 through 2-16 and in Appendix A).

- A. Noxious Weeds**
- B. Livestock Grazing**
- C. Recreation (Includes Trails, Roadless, and Unroaded Areas)**
- D. Visuals**
- E. Wildlife Issues (TES, Sensitive, MIS Species)**
- F. Sensitive Plants**
- G. Old Growth/Vegetative Diversity**
- H. Heritage Resources**
- I. Smoke Emission**
- J. Economic Analysis**
- K. Roads**

3) Consistency with laws, regulations, and policy

Laws, regulations, and policies that pertain to this project include the Gallatin Forest Plan, the Gallatin National Forest Land and Resource Management Plan FEIS (1987); the Gallatin National Forest Travel Plan Decision, Region 1 Soil Standards, 1995 Federal Wildland Fire Management Policy and Program, National Fire Plan 2000, the Endangered Species Act of 1973, Executive Order 11990 (wetlands and floodplain degradation), Executive Order 12898 (Environmental Justice), Federal Noxious Weed Management Act, Forest Service Manual 5150 Fuels Management, Forest Service Manual 2526 Riparian Management, Migratory Bird Act of 1918 (as amended), Multiple Use Sustained Yield Act of 1960, National Environmental Policy Act of 1969 (NEPA) as amended; National Forest Management Act of 1976 (NFMA), National Historic Preservation Act of 1966; State of Montana Water Act of 1974, Clean Water Act of 1977, Clean Air Act of 1963, State of Montana Best Management Practices; Trout Unlimited Settlement Agreement; Land Use Strategy for Westslope and Yellowstone Cutthroat Trout; Cooperative Conservation Agreement for Yellowstone Cutthroat Trout; and Executive Order 12962 (June 1995) Aquatic Resource Protection. More detailed descriptions can be found in Chapter 3 of the EA. A comparison of compliance between the three alternatives is summarized below:

Alternative 1 (No Action Alternative) would be consistent with the above-mentioned laws, regulations, and guidelines, however, the majority of the treatment areas lie in Management Area 8 as described in the Gallatin Forest Plan (Chapter III). Management Area 8 goals are to provide for productive timber stands, optimize growing potential, and develop equal distribution of age classes to optimize sustained timber production and improve vegetative diversity. No vegetative treatments would occur in the Smith Creek WUI with selection of Alternative 1 and opportunities to improve vegetative diversity and forest health would be foregone in the immediate future. The 1995 Federal Wildland Management Policy and program's number 1 priority is firefighter and public safety. With Alternative 1, there would be no modification of vertical and horizontal fuel loadings in the Smith Creek WUI, adjacent to private residences and structures.

Alternative 2 (Proposed Action Alternative) would be consistent with all of the above-mentioned laws, regulations, and guidelines. Opportunities associated with goals for Management Area 8 to optimize growing potential, improve forest health, and improve vegetative diversity would be achieved through the various vegetative treatments associated with both of the action alternatives. Implementation would help create a mosaic of non-forested and forested structural stages and would improve wildlife habitat for those species dependent on non-forested habitat types such as grasslands, willows, aspen, and wet meadows. The 1995 Federal Wildland Management Policy and program's first priority is firefighter and public safety. Treatments associated with Alternative 2 would modify vertical and horizontal fuel loadings in the Smith Creek WUI adjacent to private residences and structures and provide for additional time for evacuation, were a catastrophic wildfire to occur. Compliance with all other laws, regulations, and guidelines would be ensured by applying effective mitigation as outlined on pp. 2-30 through 2-39 of the EA.

Alternative 3 (Selected Alternative) will comply with all laws, regulations, and policies listed above for the same reasons. Effects of vegetative treatments would be the same as those with implementation of Alternative 2 regarding consistency with laws regulations, and standards.

X. P

Collaboration with the public, private landowners, recreationists, and other interested parties has been and will continue to be important in the development and implementation of the Smith Creek Vegetation Treatment Project. The proposal was developed with input from adjacent private homeowners, as well as state, county, and local officials. Public meetings and field trips have been held with the Forest Service providing information and updates regarding the proposed project on National Forest System lands.

The initial scoping letter for the Smith Creek Vegetation Treatment Project was sent to interested parties on February 22, 2006 (Mailing List, Project File). More than 100 letters were mailed to private individuals, organizations, groups, businesses, media and elected officials. This scoping letter was fairly broad in scale, identifying the potential project area, the purpose and need for the

project, and types of treatments that were likely to occur. Individual treatment units were not identified at that time. Seventeen comment letters were received. These comments were considered in determining potential issues and developing actual treatment units associated with the proposed action.

A public meeting regarding the project was held at the Wilsall Community Center on June 29, 2006. An invitation letter for the meeting was sent to all individuals on the original scoping mailing list. The meeting, facilitated by the District Ranger and IDT members, was attended by approximately 25 people, including local landowners, and representatives from the Park County Environmental Council, the Park County Fire Department, the Rocky Mountain Resource and Development Council (R,C&D), and Senator's Rehberg's office. The attending public asked for a field trip to the Project Area. The resultant field trip, led by the Livingston District Ranger, was scheduled for July 9th. The purpose of the trip was to look at potential treatment areas as well as additional areas that could be considered for treatment. The intention of this field trip was to get as much public input as possible to be able to add, eliminate, or modify treatment areas in order to determine the scope of the project and come up with a proposed action. Approximately twelve local landowners attended the public field trip on July 9th giving additional input and ideas to be used for project development.

A public meeting/workshop sponsored by the Northern Rocky Mountain Resource and Conservation Development Center (RC&D) in conjunction with the Gallatin National Forest was held on July 19th, 2006 at the Wilsall Community Center. This meeting was an informational meeting concerning how landowners can protect their homes from potential threats of wildfire. Jack Cohen, a research scientist with the Fire lab in Missoula, gave an in-depth presentation on how a home ignites when in the path of a wildfire. Building materials, landscaping, maintenance and placement of your home was discussed in regards to structure protection. J.T. Smith, the Economic Development Coordinator for the RC&D, spoke about grant opportunities for WUI communities to do hazard fuel reduction projects on private land. Around 12-14 homeowners from the Smith Creek area attended.

Following the original February scoping, the Forest Service met with private landowners in the Smith Creek area, Park County, and other interested parties to come up with actual proposed treatment units. Forest Service specialists attended IDT meetings and conducted field reconnaissance to ground truth the proposed units in order to further refine the proposed action. A second scoping letter was sent to interested individuals on September 29, 2006 as a follow-up to the original scoping letter that sought public comments on the preliminary proposed action. This refined scoping letter was mailed to approximately seventy five local landowners and other interested parties with ten comment letters being received concerning the proposal.

Another public meeting was held at the Clyde Park Community Center on November 6th. All of the public that previously expressed interest in the project, provided comments, or attended public meetings or field trips regarding the project were sent a letter of invitation. This meeting was scheduled for the public to discuss, relay concerns, and clarify questions related to the proposed action as identified in the September scoping letter. Approximately 20 local landowners and small business owners attended this meeting, and gave their input regarding the proposal.

Another public field trip was held in July 2007 to review the road maintenance work that would be completed in the project area the summer/fall of 2008 with special funding as well as to review the potential thinning units and road maintenance treatments associated with this project. This field trip was held to provide the public with an on the ground opportunity to comment on various aspects of the proposed project before the EA was released.

The environmental issues addressed in the EA were identified through the processes described. Significant issues were used to develop alternatives to the proposed action and to focus the scope of the analysis on the issues that are significant to my decision. Documentation of the review of scoping, comments, and potential issues can be found in the Project File.

The Smith Creek Project was identified on the Gallatin National Forest NEPA Quarterly Project Listings for winter, spring, summer, and fall 2006 & 2007.

XI. Consistency With Other Laws, Regulations, and Policies

Gallatin Forest Plan

Management Area Direction

The Forest Plan subdivided the forest into 26 management areas (MA's). These areas are described in detail in Chapter 3 of the Forest Plan (FP, pp. III-2 through III-73). Vegetative treatments associated with my decision would occur within three Management Areas (MAs) 7, 8, and 10. The majority of the harvest activity acres associated with my decision fall primarily in Forest Plan Management Area MA8 (timber management). The sections on Management Area Map M-10 that are displayed as MA 99 were previously privately owned and traded to the Forest Service in 1997 with the Goat Creek Land Exchange. These sections have not officially been assigned management areas after the land trade. The interim management direction for these areas is to manage them the same as adjacent areas. Section 1 is the only section containing treatment units that is currently unclassified. The proposed units in Section 1 are adjacent to MA8 on the north, east and south boundaries, so the interim direction would be to treat them as such.

Some of the harvest units include small acreages of narrow linear inclusions of MA7 (riparian). MA7 is suitable for timber harvest as long as the needs for riparian dependent species are met. Standards relative to wildlife and fisheries within these MAs include providing for wildlife and fishery habitat improvement consistent with MA goals and to incorporate considerations for wildlife and fisheries in the project planning process. Improvement of specific wildlife and fishery habitats was integrated into the purpose and need for this project. Detailed analysis was completed to identify and mitigate for any adverse affects. The action alternatives meet these wildlife and fishery standards applicable to MA 8, as well as MA7 (riparian). Standards for Management Areas 7 & 8 applicable to the six significant issues would be met with the implementation of the mitigation measures outlined in the EA pp. 2-30 through 2-39.

The Meadow Creek prescribed burn falls within MA10 (open grasslands interspersed with suitable timberlands). Additional direction can be found in the Forest Plan on (pp. III- 19-25, and 30-31). Specific resource management direction is given in Chapter 1 (pp. 1-12 through 1-13) of the EA. The Meadow Creek burn is consistent with MA10 management direction.

There is nothing in my decision (Alternative 3) that is incompatible with the direction for any of the Management Areas that are found in the Project Area.

General Direction

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.2 – Use the Montana Cooperative Elk-Logging Study when evaluating timber sales and road developments in elk habitat. *The Gallatin National Forest Travel Management Plan amended the Gallatin National Forest Land and Resource Management Plan (Forest Plan) to remove this direction in October 2006.*

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.4 – Use the Montana Cooperative Elk-Logging Study for analyzing elk habitat security and conduct [HEI] analysis. *The Gallatin National Forest Travel Management Plan amended the Gallatin National Forest Land and Resource Management Plan (Forest Plan) to remove this direction in October 2006.*

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.3 – Big game winter range will be managed for forage and cover. Winter range is not located within the project area; elk migrate out of National Forest and utilize lower elevation private lands.

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.5 – Maintain hiding cover associated with key habitat components. Hiding cover was estimated at approximately 70-90% of the area and is not limiting. There were no areas of concern identified for big game species for this project. The vegetative structural diversity analysis indicates a 1% decrease in the pole, mature, and old growth structural classes, maintaining acceptable levels of hiding cover. Identified mitigation measures would facilitate fall migration to winter range.

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.7 – Standards for snag and down woody material will be followed. Snag habitat needs were considered for Townsend's big-eared bat, flammulated owl, Northern goshawk, pine marten, and migratory birds. Forest Plan standards for snag and down woody debris management would be met under the Selected Alternative. Snag habitat would remain well distributed across the landscape within all forest types. In addition to the mitigation described in the EA (pp.34 & 35), additional measures as described on p. 14 of this document would be implemented.

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.8 – Emphasis will be given to the management of special and unique wildlife habitats such as wallows, licks, talus, cliffs, caves, and riparian areas. Key components such as cover, security areas, and road densities would remain unchanged with the proposed action or any of the alternatives. The selected alternative would not result in adverse modification of big game or its associated

habitat. Elk population goals have been met for this EMU and are considered to be healthy and widely distributed.

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.11 – Roads and forest cover will be managed to provide habitat security and diverse hunting opportunity. A Hillis (Hillis and others 1991) model vulnerability analysis was also conducted for HD315. This indicated that 36% of the hunting district met the Hillis model for elk security cover (30% is recommended). Forest cover is not limiting in this project area and there are no new roads or changes in access. Identified mitigation measures would provide quality bow hunting opportunities to better meet population harvest objectives.

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.12 – Habitat that is essential for species identified in the Sensitive species list developed for the Northern Region will be managed to maintain these species. Sensitive species were addressed as part of the analysis for proposed vegetation treatment in the Smith Creek project area. All terrestrial sensitive species were dismissed or analyzed in detail. Mitigation measures were identified as appropriate.

Forest Plan Standard for Wildlife and Fish, page II-18, section 6.a.13 – Indicator species will be monitored. Indicator species were identified and addressed as part of the analysis for proposed vegetation treatment in the Smith Creek project area. Mitigation measures were identified as appropriate.

Forest Plan Standard for Threatened and Endangered Species, page II-18, section 6.b.all. Threatened and endangered species were addressed as part of the analysis for proposed vegetation and stewardship treatments.

Forest Plan Standards for grazing (p. II-20). The main guideline applicable to this project is: “Structural and nonstructural improvements to increase forage production will be planned and scheduled through the allotment management process”. Forest Plan Standard for Vegetative Diversity, page II-18, section 6.c.1 – Forest lands and other vegetative communities such as grassland, aspen, willow, sagebrush, and whitebark pine will be managed by prescribed fire and other methods to produce and maintain the desired vegetative conditions. My decision includes vegetative treatments and prescribed fire treatments that will enhance vegetative diversity for these vegetative communities.

Forest Plan Standard for Recreation, page. II-1 - Provide for a broad spectrum of recreation opportunities in a variety of Forest settings. The Forest Plan recognizes objectives for recreation settings by incorporating the Recreation Opportunity Spectrum (ROS), which provides a framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities (FP, pg. II-2). Furthermore, the Plan specifically identifies as objectives activities that will be managed 1) to provide for users’ safety, 2) that existing recreational hunting opportunities will be maintained, 3) that recreation trails will provide safe public access, and 4) to continue the cabin rental program (FP, pg. II-2-3). Alternative 3 would comply with this direction provided by the Gallatin Forest Plan.

Forest Plan Direction for Visual Resource, page II-1 - Provide visitors with visually appealing scenery. Forest Plan Visual Quality Objectives (VQOs) are a blending of the results from the VMS Inventory and other resource considerations. The VQOs serve as the Forest Plan standards for visual quality that provide large-scale guidance for the degree of acceptable landscape change for all management initiated landscape-altering activities (FP, pg. II-16). The five VQOs that are assigned to specific land polygons in the Forest Plan are Preservation, Retention, Partial Retention, Modification, and Maximum Modification. Within the Smith Creek project area, the Forest Plan VQOs of Retention and Modification apply. The definitions of these VQOs are shown on page VI-44 of the Gallatin National Forest Plan. By implementation of the mitigation and design criteria outlined in the EA on pp. 2-36 & 2-37, my decision would meet Forest Plan standards for visual quality.

Forest Plan Direction for Air Quality in Forest Wide Standards, page II-23-.Require the Forest to cooperate with the Montana Air Quality Bureau (now DEQ) in the SIP and smoke management plan. By limiting the timing, quantity, and intensity of the burning activities as described in the EA Chapter 2 (mitigation), my decision would comply with the air quality laws, guidelines and standards.

The Gallatin National Forest Land and Resource Management Plan (1987)

My decision tiers to the Final Environmental Impact Statement (FEIS) and Land and Resource Management Plan (Forest Plan) for the Gallatin National Forest (USDA Forest Service 1987 PF 206 & 206(a)). The Forest Plan provides direction for all resource management programs, practices, uses, and protection measures for the Gallatin National Forest.

Gallatin Forest Travel Plan Direction

There are no applicable travel plan standards for wildlife, water quality, and/or fisheries. There are no new roads, reconditioned roads, or changes in the road and/or trail system proposed for this project. Open road densities would remain the same. From a wildlife, water quality, and fisheries perspective, the project would be consistent with our Travel Plan direction.

Regional Standards

Region 1 Soil Standards

Region 1 soil standards and guidelines should be met for all units associated with my decision if the soil protection BMPs are used and the specified restoration practices are carried out. Therefore, there would be no cumulative effects to soil quality or productivity. Alternative 3 is consistent with the Soil Quality Standards as applied to cumulative effects and to the Forest Plan in terms of protecting soil productivity.

National Fire Plan Direction

The 1995 Federal Wildland Fire Management Policy and Program contains nine guiding principles that support my decision regarding the Smith Creek Vegetation Treatment Project.

- 1.) ***Firefighter and public safety is the first priority in every fire management activity.*** One purpose and need of the Smith Creek Vegetation Treatment Project is to improve firefighter and public safety, modifying fire behavior by changing the fuels environment in the portions of the WUI that are the closest to residences and other structures. The modification of fuels will provide safer conditions in the event of a large wildfire event.
- 2.) ***The role of wildland fire as an essential ecological process and natural agent have been incorporated into the planning process.*** Treating the Smith Creek WUI will reduce the current level of risk, allowing the possibility of future wildland fires to play an ecological role under certain conditions.
- 3.) ***Fire management plans, programs, and activities support land and resource management plans and their importance.*** The Smith Creek project is consistent with the Federal Wildland Fire Management Policy and the Gallatin National Forest Fire Management Plan.
- 4.) ***Sound risk management is the foundation for all fire management activities.*** The Smith Creek Vegetation Treatment Project, specifically Unit G, analyzes the risk to the public and firefighter communities associated with the Selected Alternative by comparing the resulting fuel conditions associated with management activities versus “no action”, as related to fire behavior.
- 5.) ***Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.*** With the Smith Creek Vegetation Treatment Project, the overriding value at risk is the safety of the public and firefighters. A cash-flow analysis included in Appendix A to this document supports the conclusion the anticipated return from the sale of wood products will exceed the total cost of the activities needed to realize the mandatory post-treatment activities and that funds will likely be available to achieve some of the optional ecosystem restoration items such as additional road maintenance, possible aspen fencing, further road reclamations, and a toilet at the ATV parking area.
- 6.) ***Fire management plans must be based on the best available science.*** The Smith Creek Vegetation Treatment Project has incorporated the latest science and modeling techniques for fire behavior prediction and the effectiveness of fuels treatments. These techniques include Forest Vegetation Simulation –Fire/Fuel Effects Extension (FVS-FFE), NEXUS, and BEHAVE (See p. 2-7 Issue Indicator for a description of these modeling techniques).

- 7.) ***Fire management plans and activities incorporate public health and environmental quality considerations.*** The Smith Creek Vegetation Treatment Project addresses the need for increasing public and firefighter safety in the event of a large fire event. Smoke management, recreational values, and the impacts of fuels treatments on wildlife, fish, noxious weeds, soils, and visuals are also addressed in the document.
- 8.) ***Federal, Tribal, State and local interagency coordination and cooperation are essential.*** Coordination and cooperation for the project included local consultation with the Park and Meagher County officials including county commissioners, fire, and law enforcement; and the Northern Rocky Mountain Resource Conservation and Development Council (RC&D). Federal cooperation and consultation includes State and Federal Private Forestry groups and the Crow tribal government.

National Fire Plan 2000

The National Fire Plan 2000 states “Assign the highest priority for hazardous fuels reduction to communities at risk, readily accessible municipal watersheds, threatened and endangered species habitat, and/or other important local features, where current conditions favor uncharacteristically intense fires”. The analysis area for the project has been identified by the Park County CWPP as a WUI that is at high risk for catastrophic wildfire. The actual treatment units associated with my decision are located in the portions of the Smith Creek WUI that are in the closest proximity to residences, other structures, and primary transportation routes.

Legal Requirements

My decision adheres to all of the following legal requirements:

Endangered Species Act (ESA) of 1973

Under Section 7 of the Endangered Species Act, each Federal agency must ensure that any action authorized, funded or carried out is not likely to jeopardize the continued existence of any threatened or endangered species. The action alternatives are “*not likely to jeopardize*” the gray wolf. There are no plants listed as threatened or endangered in the project area. No concurrence is needed from the US Fish and Wildlife Service for the 10J rule non-essential experimental species (gray wolf). An analysis of effects on lynx was conducted for this project and included in the Environmental Assessment wildlife report; conservation measures in the LCAS (Ruediger and others 2000) and the interagency Conservation Agreement (USDA and USDI 2005, USDA and USDI 2006) were used to assess effects. These conservation measures are more conservative than the recent Northern Rockies Lynx Amendment which does allow vegetation treatment projects within WUI areas with fuel treatment objectives. Regardless, the US Fish & Wildlife Service recently removed the threatened Canada lynx from their list of species that may be present on the Gallatin Forest north of I-90. The Forest Service and US Fish and Wildlife Service jointly determined that the Crazy Mountains are not occupied by lynx. Consultation with the US Fish and Wildlife Service is not required for projects in “unoccupied” habitat.

Executive Order 11990

Executive Order 11990 requires Federal Agencies to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands when carrying out their responsibilities. No floodplains or small wetland areas would be lost or degraded by implementing my decision

Executive Order 12898 – Environmental Justice

Executive Order 12898 directs each Federal agency to make achievement of environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The actions taken with my decision would not adversely affect any disadvantaged or minority groups because of the project area's distance from large population centers and the diffuse level of adverse impacts on any social group. A project such as this would not produce hazardous waste or conditions that might affect human populations.

Federal Noxious Weed Act of 1974 (as Amended) and Executive Order 13112

Control of noxious weeds is required by The Federal Noxious Weed Act of 1974, and by Executive Order 13112, Invasive Species, February 3, 1999. Also, the Gallatin Forest Plan (page II-28) requires the Forest to “confine present infestations and prevent establishing new areas of noxious weeds. Funding for weed control on disturbed sites will be provided by the resource which causes the disturbance.” My decision to implement Alternative 3 would comply with these laws, regulations, policy and Forest Plan direction. Funding for weed control would come from the value of the timber harvested in conjunction with this project (See EA, Appendix A, Upland Vegetation, pp. A-1 through A-10).

Forest Service Manual (FSM 5150) Fuel Management

The objective of FSM 5150.2 is to identify, develop, and maintain fuel profiles that contribute to the most cost-efficient fire protection and use program in support of land and resource management direction in the forest plan. My decision will create a fuel profile that is safer for the public and firefighters. In doing so, fires will be less difficult to control and fire protection will be more cost-efficient.

The policy associated with FSM 5150.3 is to integrate fuel management and fire management programs in support of resource management objectives. Several resource management objectives will be met with the project as well as meeting the fuel management objectives.

Forest Service Manual (FSM) 2526 Riparian Area Management

Riparian ecosystems are defined as a transition area between the aquatic ecosystem and the adjacent terrestrial ecosystem; identified by soil characteristics or distinctive vegetation communities that require free or unbound water. For the Smith Creek Vegetation Treatment Project, the Selected Alternative was designed to comply with Forest Service Manual 2526 objectives and policy.

Migratory Bird Treaty Act of 1918, as Amended

On January 10, 2001, President Clinton signed an Executive Order outlining responsibilities of federal agencies to protect migratory birds. On January 17, 2001, the USDA Forest Service and the USDI Fish and Wildlife Service signed a Memorandum of Understanding to complement the Executive Order. Upon review of the information regarding neotropical migratory birds in the wildlife report and project file, the proposed vegetation and stewardship treatments would not result in a loss of migratory bird habitat or be an extirpation threat to any migratory birds.

Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C 528)

The Multiple Use Sustained Yield Act of 1960 states "it is the policy of the Congress that the National Forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes". My decision to implement Alternative 3 would be in compliance with this act and would provide for continued opportunities for the above-mentioned resource areas into the future.

National Environmental Policy Act of 1969, as amended (NEPA)

The National Environmental Policy Act (NEPA) of 1969 requires an assessment of the impacts of human activities upon the environment. NEPA establishes the format and content requirements of environmental analysis and documentation. The entire process of preparing this EA was undertaken to comply with NEPA.

National Forest Management Act of 1976 (NFMA)

The National Forest Management Act (NFMA) requires that Forest plans "preserve and enhance the diversity of plant and animal communities...so that it is at least as great as that which can be expected in the natural forest" (36 CFR 219.27). Furthermore, implementation regulations for the NFMA specify that, "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area".

There are currently 10 terrestrial species identified as "Sensitive" that are known or suspected to occur on the Gallatin National Forest (USDA 2004). With the implementation of the action alternatives, proposed vegetation and stewardship treatments would have "no impact" on peregrine falcon, trumpeter swan, harlequin duck, and black-backed woodpecker. The determination for flammulated owl, goshawk, Townsend big-eared bat, and wolverine for the action alternatives would be "may impact individuals or habitat, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or species".

There would be "no impact" on two species recently designated as sensitive due to their delisting under the Endangered Species Act: grizzly bear and bald eagle. Prior to the delisting, no analysis was needed for grizzly bear in the Crazy Mountain Range, north of I-90; the project area is not located within a Bear Management Unit in the Recovery Plan or in occupied habitat. This species was not addressed further. The bald eagle was addressed as

“threatened” and the proposed action alternatives were found to have “no effect” as the project would not affect nesting or foraging habitat.

The three fish and amphibian species that have potential habitat in the analysis area were analyzed in the EA (pp. A-32 & A-33). Implementation of the Smith Creek Project Alternative 3 would have “no impact” or would result in a “beneficial impact” to aquatic/riparian habitat if any or all of Road Treatments B and or C are able to be funded and implemented. Surveys for western toads and northern leopard frogs suggest that they are not present in the project area. Habitat degradation is not likely to occur for these species because little riparian disturbance will occur as a result of the project.

There would be “no impact” to sensitive plants within the treatment areas due to lack of potential suitable habitat or absence of plants based on completed surveys.

National Historic Preservation Act of 1966 (NHPA)

The Forest Service is mandated to comply with the National Historic Preservation Act (as amended 1993) [Public Law 89-665], (26CFR800.1) on such undertakings that affect properties included in or eligible for inclusion to the National Register of Historic Places (NRHP). NRHP eligible sites affected by an undertaking must either be protected in-place or adverse impacts must be mitigated. My decision to implement Alternative 3 would comply with the National Historic Preservation Act (See EA, pp.A-82 through A-84).

The State of Montana Water Quality Act (1969, 1975, 1993, 1996)

The State of Montana Water Quality Act requires the state to protect, maintain, and improve the quality of water for a variety of beneficial uses. Section 75-5-101, MCA established water quality standards based on beneficial uses. The Montana Department of Environmental Quality has designated all non-wilderness surface waters in the project area as B1 Classification. Waters classified as B1 must be suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply. A 5 NTU turbidity increase above naturally occurring turbidity is allowed in B1 waters. My decision would be in compliance with the Montana Water Quality Act and Administrative Rules of Montana, State of Montana Best Management Practices, WQLS/TMDL constraints, as well as Gallatin NF Forest Plan direction for water quality protection. Sediment modeling indicates that project sediment changes are immeasurable and well within the Gallatin NF sediment guidelines.

Clean Water Act of 1977

The objective of this act is to restore and maintain the integrity of the nation’s waters. This objective translates into two fundamental goals: (1) eliminate the discharge of pollutants into the nation’s waters; and (2) achieve water quality levels that are fishable and swimmable. This act establishes a non-degradation policy for all federally proposed projects. My decision would assure continued compliance with the Clean Water Act, which provides overall direction for protection of water from both point and non-point sources of water pollution (see EA, pp. 3-19 through 3-30).

Clean Air Act of 1963

Congress passed the Clean Air Act in 1963, and amended it in 1972, 1977, and 1990. The purpose of the act is to protect and enhance air quality while ensuring the protection of public health and welfare. The act established National Ambient Air Quality Standards (NAAQS), which must be met by state and federal agencies, and private industry. The Montana DEQ is currently cooperating with the Western Regional Air Partnership (WRAP) to establish visibility goals, monitoring plans, and control measures to comply with regional haze visibility standards in all Montana Class I areas including Yellowstone National Park. The Gallatin NF Forest Plan in Forest Wide Standards pp. II-23 requires that the Forest will cooperate with the Montana Air Quality Bureau (now DEQ) in the SIP and smoke management plan. By limiting the timing, quantity, and intensity of the burning activities as described in the EA Chapter 2 (mitigation), Alternative 3 would comply with the air quality laws, guidelines and standards.

Trout Unlimited Settlement Agreement

The goals, policies and objectives for aquatic resources outlined in the Forest Plan have been further defined within an agreement with the Madison-Gallatin Chapter of Trout Unlimited (TU) in 1990. The intent of the Agreement was to provide more specific direction on timber harvest in riparian areas. Design features and mitigation have been incorporated into the Smith Creek Project to assure that all alternatives adhere to the TU Settlement Agreement (See EA, pp. 2-30 through 2-31).

Land Use Strategy for WCT and YCT

The Upper Missouri Short Term Strategy for Conserving Westslope Cutthroat Trout (UMWCT short term strategy) was finalized into a “Land Use Strategy” in April 2001. During the March 21st, 2002, GLT meeting, a decision was made to apply the finalized Land Use Strategy for implementing the 1999 MOU and Conservation Agreement for WCT in Montana to YCT populations on the Gallatin National Forest. The Strategy calls for preventing habitat degradation and improving existing populations and their habitat until a long-term recovery strategy can be established and implemented. The Strategy ensures that land-use activities, like timber sales, will be implemented in a manner that results in a “beneficial impact” or “no impact” biological decision. The habitat management guidelines outlined in the TU Settlement Agreement (i.e., manage habitats at a level of at least 90% of their inherent potential) serve as the reference level associated with impact determinations. Implementation of the Smith Creek Project Alternatives 3 would have “no impact” or would result in a “beneficial impact” in aquatic/ riparian habitat if any or all of Road Treatments B and or C are able to be funded and implemented.

Cooperative Conservation Agreement for Yellowstone Cutthroat trout within Montana.

In 1998, the Gallatin and Custer National Forests joined numerous other agencies and the Crow Tribe in forming the Cooperative Conservation Agreement for Yellowstone Cutthroat Trout within the state of Montana. This agreement establishes a framework of cooperation between the participating parties to work together for the conservation of YCT. The primary goal of the Agreement and accompanying Yellowstone Cutthroat Trout Conservation

program is to ensure the persistence of the Yellowstone cutthroat trout subspecies within the historic range in Montana at levels and under conditions that provide protection and maintenance of both the intrinsic and recreational values associated with the subspecies. A commitment identified in the Agreement that is most relevant to my decision is “modify land uses to provide the greatest degree of habitat and population protection”. Habitat and populations of Yellowstone cutthroat trout would be protected with implementation of Alternative 3.

Executive Order 12962 (June 1995)

Section 1. Federal Agencies shall, to the extent permitted by law and where practicable, and in cooperation with States and Tribes, improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities. Implementation of Alternative 3 would help to restore water quality and habitat degradation for fisheries by improving key roads in the project area that serve as sediment sources.

XI

I have determined from thorough review of the Smith Creek Vegetation Treatment Project EA and Project File that my decision is not a major federal action that would significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not needed. This determination is based upon review of the following criteria:

1. Impacts that may be both beneficial and adverse.

Implementation of the Selected Alternative (Alternative 3) would include a combination of mechanical and hand thinning on up to 800 acres of densely stocked National Forest System lands. Slash and landing piles will be burned in accordance with Montana Air Quality Standards (EA, pp. A-85 through A-90). Prescribed burning will be utilized to selectively thin approximately 300 acres that lie within the Smith Creek WUI. A site specific burn plan writing process utilizing weather and fire behavior models to determine the most optimal time period (also referred to as a window) the meet the burn objectives with the lowest possible risk of escape will be incorporated. As part of the burn plan, a comprehensive site specific “Risk” and “Potential Consequences” analysis will be developed. The “Risk” and “Potential Consequences” ratings are used to determine an overall management risk associated with the project.

Alternative 3 has been designed to be responsive to the effects of thinning, pile burning, and prescribed burning on the various resources present within the analysis area boundaries. By applying the mitigation outlined in the EA (pp. 2-30 through 2-39), there will be no significant adverse impacts to resources associated with this decision (EA, Chapter 3, p. 3-14 through 3-16). Even though forested areas will be thinned and wood fiber removed, these resources are recoverable within a relatively short timeframe (90-120 years). Additional beneficial effects will result from the implementation of

Alternative 3 for public and firefighter safety, certain wildlife habitats, and for Yellowstone cutthroat trout.

2. The degree to which the proposed action affects public health or safety.

The selected alternative is consistent with the Park County Community Wildfire Protection Plan which was approved in January of 2007. Implementation of the selected alternative would not create significant negative effects to public health and safety (air quality, water quality, recreation, special uses, transportation) due to the use of effective project design and mitigation measures as described in the EA (pp. 2-30 through 2-38). Project implementation would actually improve public health and safety by breaking up the continuous vertical and horizontal fuels, thus reducing the probability of a catastrophic crown fire in the WUI. The vegetation treatments were designed to reduce fuels along the main evacuation routes in the WUI, which would also improve public and firefighter safety.

3. Unique characteristics of the geographic area.

The Project Area is located on the west side of the Crazy Mountains along the northeast corner of the Livingston Ranger District; approximately 35 miles north of Livingston, Montana in the Smith Creek drainage. The Park County Community Wildfire Protection Plan (Project File), completed in spring of 2006, identified the Smith Creek drainage as a wildland urban interface (WUI) that is at risk from potential wildfire.

The section of the Crazy Mountains where this fuels reduction project is proposed offers scenery that is typical of many mountainous areas in Montana. In the viewsheds specific to this project, there are some visually scenic topographic landmarks, such as Goat Mountain, Scab Rock and Bear Mountain. Dense conifer stands cover the flat and rolling terrain, intermittently broken by open meadows and some talus slopes on ridges. There are infrequent stands of deciduous trees such as aspen or cottonwood, especially in wetter areas and along the streams that add visual interest and variety.

Smith Creek and the East Fork of Smith Creek flow through the project area. There would be no significant effects to wilderness or inventoried roadless areas as discussed in the EA, (Appendix A, Section D-Recreation, pp. A-14 through A-24). There are no Wild & Scenic Rivers or ecologically critical areas known to occur within the analysis area boundaries. From the analysis done, I conclude there are no unique characteristics of the geographic area that will be affected by this decision.

4. The degree to which the effects of the decision on the quality of the human environment are likely to be controversial.

Observations of past thinning and prescribed burning on the Gallatin National Forest lead me to conclude that the effects of this decision are likely to be predictable and consistent with the conclusions reached in the EA. There is no professional or scientific disagreement on the scope and effects of the selected alternative on the various resources. For these reasons, I conclude that there is not likely to be significant controversy over the degree to which this decision affects the quality of the human environment.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Effects of thinning in Wildland Urban Interface areas have been documented and monitored nationwide (An Assessment of Fuel Treatment Effects on Fire Behavior, Suppression, Effectiveness, and Structure Ignition on the Angora Fire, August 2007, Project File Vol. 2, Doc. 8-12). Thinning of various size classes of forested stands on the Gallatin National Forest has occurred for the past four decades with results that have been relatively consistent and predictable. Historically, prescribed fire has been utilized by all Federal land management agencies for a multitude of resource objectives such as: brush disposal, wildlife habitat enhancement, slash disposal, etc. This year alone, Federal land management agencies successfully completed 22,878 prescribed burns totaling 2,856,939 acres. The Forest Service accounted for a little less than half of the total National Forest System lands treated (1,151,095 acres), none of which resulted in escaped fire situations. The Meadow Creek burn plan writing process would utilize weather and fire behavior models to determine the most optimal time period (also referred to as a window) to meet the burn objectives with the lowest possible risk of escape. The models are also used to determine rates of spread, crown scorch, and tree mortality. This information is utilized to determine the number of ignition and holding personnel required to ensure the unit does not escape its boundaries. The prescribed burn would underburn the existing stands with low intensities and moderate severity. Prescribed fire techniques would utilize fire's natural nutrient recycling mechanism and ecological processes, which would better protect the stands against a future catastrophic wildfire that could result in total deforestation. The actions proposed under my decision have been used in the past and have proven effective. For these reasons, I conclude this decision will not present highly uncertain, unique, or unknown risks.

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

My decision to thin and allow prescribed burning to reduce fuels in the Smith Creek Wildland Urban Interface is project specific. The actions associated with project implementation will be monitored and success in achieving the Purpose and Need for the project will be assessed. Although successful implementation of the project could lead to future projects on the Forest that are similar in nature, I do not foresee that this decision establishes a precedent for any other future actions, nor does it represent a decision in principle about any other future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The reasonably foreseeable cumulative effects of this decision are detailed in the EA (Chapter 3 and Appendix A) for the various resources that could be affected by the project. From these analyses, I conclude that neither the effects of this decision itself, nor cumulative or linked effects of past, current, or reasonably foreseeable future actions appear likely to lead to significant cumulative impacts.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in, or eligible for listing in, the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.

There is one historic site that has been found in the Smith Creek project area. Prehistoric sites are rare in the lower elevations of the Crazy Mountains with most prehistoric sites occurring at high prominences. Several sites have been recorded in the drainage but not near the treatment units. There is potential for historic sites related to early sheepherding, homesteading, and logging operations, but none have been documented.

The design measures associated with the action alternatives for site protections (EA, p. 2-39) can easily be implemented so that no direct or indirect affects would result from the treatments prescribed in the units. See EA, (Appendix A, Section I, pp. A-82 thruA-84) for further details.

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

My decision to proceed with implementation of Alternative 3 would not adversely affect any endangered or threatened species or their habitat. It was not necessary to prepare a Biological Assessment for this project because the bald eagle and grizzly bear have been de-listed (See USFWS Threatened, Endangered, and Candidate Species for the Gallatin National Forest 11/5/07); the project area is outside of lynx habitat, and there was a “not likely to jeopardize” determination for the experimental, non-essential gray wolf. The Selected Alternative is “*not likely to jeopardize*” the gray wolf (No concurrence is needed from the US Fish and Wildlife Service for the 10J rule non-essential experimental species gray wolf). An analysis of effects on lynx was conducted for this project and included in the Environmental Assessment wildlife report; conservation measures in the LCAS (Ruediger and others 2000) and the interagency Conservation Agreement (USDA and USDI 2005, USDA and USDI 2006) were used to assess effects. These conservation measures are more conservative than the recent Northern Rockies Lynx Amendment which does allow vegetation treatment projects within WUI areas with fuel treatment objectives. Regardless, the US Fish & Wildlife Service recently removed the threatened Canada lynx from their list of species that may be present on the Gallatin Forest north of I-90. The Forest Service and US Fish and Wildlife Service jointly determined that the Crazy Mountains are not occupied by lynx. Consultation with the US Fish and Wildlife Service is not required for projects in “unoccupied” habitat. There are no plants listed as threatened or endangered in the project area. Also see consistency with Endangered Species Act of 1973 (p. 28).

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The applicable laws, regulations, and Forest Plan direction related this action are discussed in the EA by resource in Chapter 3 and Appendix A and in the Decision Notice (pp. 24-33). I find my decision to be fully in compliance with applicable laws and regulations. Further, my decision is consistent with the Gallatin Forest Plan Management Area direction for the project area.

XIII. Implementation

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. Implementation of my decision to reduce hazardous fuels and implement vegetation treatment, under the conditions of this decision, would likely begin in the fall of 2008 and could continue for up to four years.

If appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

XIV.

This decision is subject to appeal pursuant to 36 CFR 215.11. Only individuals or organizations that submitted comments during the comment period may appeal. A written appeal must be submitted within 45 days following the publication date of the legal notice of this decision in the Bozeman Chronicle, Bozeman, Montana. It is the responsibility of the appellant to ensure their appeal is received in a timely manner. The publication date of the legal notice of the decision in the newspaper of record is the *exclusive* means for calculating the time to file an appeal. Appellants should not rely on date or timeframe information provided by any other source.

Paper appeals must be submitted to: USDA Forest Service, Northern Region, ATTN: Appeal Deciding Officer, P.O. Box 7669, Missoula, MT 59807; or USDA Forest Service, Northern Region, ATTN: Appeal Deciding Officer, 200 East Broadway, Missoula, MT 59802. Office hours: 7:30 a.m. to 4:00 p.m. Fax (406) 329- 3411.

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

It is the appellant's responsibility to provide sufficient project- or activity-specific evidence and rationale, focusing on the decision, to show why the decision should be reversed. The appeal must be filed with the Appeal Deciding Officer in writing. At a minimum, the appeal must meet the content requirements of 36 CFR 215.14, and include the following information: The appellant's name and address, with a telephone number, if available; A signature, or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the appeal); When multiple names are listed on an appeal, identification of the lead appellant and verification of the identity of the lead appellant upon request; The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision; The regulation under which the appeal is being filed, when there is an option to appeal under either 36 CFR 215 or 36 CFR 251, subpart C; Any specific change(s) in the decision that the appellant seeks and rationale for those changes; Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement; Why the appellant believes the Responsible Official's decision failed to consider the substantive comments; and, How the appellant believes the decision specifically violates law, regulation, or policy.

My decision is also subject to appeal by current permittees under 36 CFR 251, Subpart C. Any appeal must be filed (postmarked) within 45 days of the date of this letter. Permittee appeals should be sent to:

Forest Supervisor/Reviewing Officer
Gallatin National Forest Supervisor's Office
P.O. Box 130
Bozeman, MT 59771

You must simultaneously send a copy of the notice of appeal to me at the address shown on this letterhead. Notices of appeal must meet the content requirements of 36 CFR 251.90. In addition, please feel free to contact me if you wish to meet and discuss issues and concerns regarding this decision.

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

Offer to Meet. When an appeal is received under this rule, the Responsible Official, or designee, must contact the appellant and offer to meet and discuss resolution of the issues raised in the appeal (36 CFR 215.17). If the appellant accepts the offer, the meeting must take place within 15 days after the closing date for filing an appeal (i.e. 45 to 60 days from the publication date of the legal notice of this decision in the Bozeman Chronicle). These meetings, if they take place, are open to the public. For information on if, when, and where such a meeting is scheduled, please visit the following web site:

www.fs.fed.us/r1/planning/final_appeals/current_appeals_and_objections.pdf

XV. Further Information and Contact Persons

Copies of the Smith Creek Vegetation Treatment EA and Decision Notice are available at the Livingston Ranger District Office in Livingston, Montana. Copies are also available on the internet at <http://www.fs.fed.us/r1/gallatin> in the Project and Plans area.

For additional information or questions concerning this decision or appeals process, please contact Barbara Ping, East Zone NEPA Coordinator, (406)-522-2558 or myself, Ron Archuleta, Livingston District Ranger at (406) 222-1892.

/s/ Ron J. Archuleta

12/19/2007

RON J. ARCHULETA
District Ranger
Livingston Ranger District

Date

APPENDIX A

RESPONSE TO COMMENTS

INTRODUCTION

This appendix to the Smith Creek Vegetation Treatment Project Decision Notice contains the agency's responses to questions and comments received during the 30-day public review and comment period for the April 2007 Environmental Assessment. Official comments regarding the project were due on September 14, 2007. Due to extreme fire activity on the district and the unavailability of district personnel to answer questions during the first week of the comment period, the unofficial comment period was extended until September 28, 2007.

A total of 7 letters were received. Table A-1 below lists the letter number and commenter. Comments are grouped by subject matter or resource. Each comment is identified by letter number first and then by individual comment number after the hyphen (Example 1-1). The comments were transcribed as written in the comment letters with the agency response following the comment. Some comments are repetitive, so responses to these comments will refer to previous letters where that specific comment has already been addressed in this appendix. Identical comments have been grouped, showing the letter and comment numbers that apply.

Table A-1 Letters and Comments received in response to the August 2007 Environmental Assessment

CHAPTER 3 LETTER NUMBER	Commenter
1	Scott Opitz, MT Fish, Wildlife, & Parks
2	Sharon Hapner
3	Ron & Janet Hartman
4	Will & Joyce Grohmann
5	Ansel Luxford
6	Sara Jane Johnson, Native Ecosystems Council
7	Alliance for the Wild Rockies

RESPONSE TO COMMENTS

General

Comment 2-9. The Forest Service NEPA analysis of this area does not mention or discuss climate change as a significant factor driving the changing biodiversity of the forest. I have to assume that the neglect of this topic is politically driven by Bush administration policy.

Response: Climate change is in the news everywhere and the Forest Service is committed, over the next several months, to distributing educational materials in order for the general public, as well as our various specialists, to better understand the implications from both a global and local perspective. A national framework for guiding and directing land management activities is currently being developed. In some landscapes the changes in management will be significant, based on anticipated regional and local effects of a changing global climate. We do not as of yet have direction or guidance as to how to address climate change at the local project level.

Comment 2-10: There are eleven separate issues included in the analysis under those not found to be significant and I must assume that the decision regarding this has already been made and would be a waste of my time and yours to comment.

Response: As stated on p. 2-4 of the EA, comments identified during scoping were evaluated against the following criteria to determine whether or not the concern would be a major consideration in the analysis process:

- 1) Has the concern been addressed in a previous site-specific analysis such as in a previous project analysis or through legislative action?
- 2) Is the concern relevant to and within the scope of the decision being made and does it pertain directly to the proposed action?
- 3) Can the concern be resolved through project design or mitigation (avoiding, minimizing, rectifying, reducing, eliminating, or compensating for the proposed impact) in all alternatives?

For this proposal, six issues were found to be "significant" to the decision and achievement of the purpose and need. These are discussed in the issues section of Chapter 2 and also in Chapter 3 of the EA (pp. 3-18 through 3-91). These are the issues that the interdisciplinary team and decision-maker concluded were the primary factors to be considered while developing the alternatives and helping to guide the decision.

As stated on p. 2-9 of the EA, the National Environmental Protection Act (NEPA) provides for the identification and elimination from detailed study the issues which are not significant or which have been covered by prior environmental review. This narrows the discussion of these issues to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere (40 CFR 1501.7(3)). While these concerns are important, they were either unaffected or mildly affected by the proposed action, or the effects could be adequately mitigated.

A number of issues were analyzed but not “significant” factors in the decision process for proposed fuel reduction activities in the Smith Creek Project Area. These issues were eliminated from further analysis in this EA for the following reasons:

1. They were not relevant or specific to this proposal for fuel reduction in the Smith Creek analysis area.
2. They were beyond the scope of this project level analysis and decision to be made;
3. Experience or analysis from other similar projects on the forest has consistently demonstrated that effects related to this issue are not “significant”.
4. The proposed action was modified to include mitigation, which is effective in alleviating any major impact.

Comment 6-25: Overall it appears that the analysis area has been significantly impacted from past logging and road building. We believe that an EIS is required on this basis alone.

Response: Past activities that have occurred in the analysis area are outlined on pp. 3-1 through 3-4 of the EA. The cumulative effects of these, as well as current and reasonably foreseeable activities in the area have been analyzed and are included in Chapter 3 (pp. 3-19 through 3-92 and in Appendix A (A-1 through A-110)). The FONSI, included with this decision notice, documents that the decision made by the responsible official is not a major federal action that would significantly effect the quality of the human environment and therefore would not require an EIS. The criteria that this determination was based on are addressed in the attached FONSI.

Comment 7-26: The EIS must contain a discussion of the connection between the major individual management actions carried out in the past, and the environmental harms or benefits of each of those actions

Response: The Smith Creek EA includes a discussion of past, present, and reasonably foreseeable activities that could contribute to cumulative effects on pp. 3-1 through 3-6 of the document. These activities were considered in the cumulative effects analyses in Chapter 3 for each of the significant issues and by resource in Appendix A for the issues not considered to be significant.

Comment 7-29: The EIS must contain a monitoring plan that includes important affected resources such as wildlife, soils, fuels, and fire risk.

Response: The EA contains a monitoring plan that outlines project monitoring direction for important affected resources on pp. 2-40 through 2-42 of the document.

Comment 7-41: Also, if the EIS cites mitigation measures it must cite the results of monitoring that prove such mitigation measures can reasonably be expected to be effective in protecting and maintaining soil productivity.

Response: Mitigation measures for the project can be found on pages 2-30 through 2-39 of the EA. Mitigation are grouped by resource affected and past effectiveness of this type of mitigation, as determined by monitoring, is outlined at the end of each section. The monitoring plan for the project is outlined on pages 2-40 through 2-42. Also see response to above Comment 7-29.

Wildlife, Aspen, & Fragmentation:

Comment 2-6. Removing conifers near aspen stands in wetland areas of the Smith Creek site may indeed encourage seedling propagation due to increased sunlight, however, these areas are also where the most intense grazing and browsing occur.

Response: In order to address the issue of wildlife habitat diversity, and the declining aspen distribution and vigor, treatments in Units A1 and G were designed to reduce conifer competition so that lack of sunlight and heat are no longer the limiting factor. The potential effect of grazing by permitted domestic livestock and big game on aspen regeneration was considered. Mitigation and monitoring for livestock grazing and browsing by big game was identified and designed to protect aspen regeneration. A combination of adaptive management strategies as defined in the Three Peaks Allotment Management Plan and fencing options would be employed. The grazing allotment permittee has been consulted and is willing to use various options to limit livestock impact on the aspen regeneration based on monitoring and further discussion.

Comment 6-3: The management criteria for the goshawk in the EA were extremely limited, and are not based on any published recommendations for this species.

Response: As discussed in the EA on page A-54-57 and based on modeled habitat and field surveys, the project area offers limited habitat with optimal characteristics for nesting. There is a low potential for goshawks to use the project area for nesting. However, mitigation was identified if a nest was located during project implementation, including buffering the nest area from treatment and prohibiting activity from April 15-August 15 within the area that represents the post-fledging area (PFA). The size of the buffer area is about average and based on various research reports. The project may alter 88 acres, or approximately 16%, of the total potential nesting habitat that was modeled in the 17,000 acre analysis area. Foraging areas are large, are comprised of a diversity of vegetative types, and would remain largely intact.

Comment 6-4: If the goshawk is not present in the analysis area, does this mean that the Forest Service has no responsibility to manage for species indicated by the goshawk?

Response: In accordance with the National Environmental Policy Act (NEPA) of 1969, the effects of the Smith Creek Vegetation Treatment project were assessed. The Northern goshawk is the MIS indicator for dry Douglas fir old growth. There are no Forest Plan standards for the management of goshawk. An assessment of the impacts of the proposed project on goshawk was conducted using available information on population status and distribution; occurrence records from inventory efforts; field surveys; modeling of the vegetation database for potential suitable habitat; and scientific literature. As disclosed in the EA, Kowalski (2006) and Samson (2006) concluded that the northern goshawk and its habitat appear abundant and well distributed across Region 1 of the Forest Service. The implementation of the proposed project would have little, if any, direct or indirect effects to goshawk. Despite the limited habitat available in the project area, mitigation was recommended to mitigate adverse effects to the goshawk should a nest be located during project implementation.

Comment 6-5: What has been the basis for the Forest's use of the current snag standard in regards to monitoring effectiveness in maintaining viable populations of cavity nesting birds?

Response: The Gallatin Forest Plan Amendment 15 (1993) for snag standard increased the level of snags to be retained to respond more fully to the needs of snag dependent species and was based on a scientific understanding of disturbance ecology and current research at that time. The Northern Region Snag Management Protocol (2000) also offers some snag retention guidance using models and existing data to predict snag availability over time. There has been no research or literature that indicates the standards are not adequate. However, ensuring the desired snag density is achieved over time by a certain vegetation treatment is worth monitoring. There is a monitoring item for snags in the monitoring section of the EA to determine whether the snag retention prescriptions were effective in maintaining sufficient habitat.

Comment 6-6: How can you predict that the Forest Plan snag direction will be met without a snag inventory?

Response: A snag inventory was completed in November 2007. The inventory confirmed that we are currently meeting standards for snag retention. In addition, data derived from FIA plots at the Forest, District, and Crazy Mountain range levels, also indicate we are well within snag standards. Snag standards during implementation would continue to be met in a variety of ways. Snags will be retained in clumps rather than uniformly distributing them throughout harvest units. Other mitigation identified in the EA would take advantage of desired standing dead within the marked portions of units. A provision in the contract would require the contractor to leave all standing snags except those recently bug-killed (these would be taken to remove insect agents from the project area) or those that pose a safety hazard. In addition, the units marked on the ground are smaller than the units originally proposed. For example, the original size of unit A1 was 52 acres but was reduced to 37 acres. Additionally in this unit, all aspen would be left regardless of condition (dead, alive, fallen) which would contribute substantially to the snag standard. Similarly, unit B and D, originally proposed at 165 and 125 acres respectively were reduced to 119 and 66 respectively. This was due to the desire to leave reserves and clumps

within the larger polygons, including replacement snags. Snag habitat would remain well distributed across the landscape within all forest types. There would be also be approximately 10-15 tons per acre (on average per unit) of woody material 3” and greater left on the ground after treatment. This is particularly pertinent in units A1, B, C, and D where currently there is not that much material on the ground due to past harvest slashing activities. Also see response to Comment 2-4 and 7-20.

Comment 6-7: Why isn’t the specific number of snags to be left ever identified?

Response: The Gallatin Forest Plan Amendment 15 standard (1993) for snags is to leave an average of 30 snags per 10 acres within the [marked] timber harvest unit and 30 live trees per 10 acres as replacement snags.

Comment 6-8: Please evaluate how the proposed commercial thinning and management to reduce insects and disease will affect snag recruitment, and in that respect, with the Forest Plan standard for snags.

Response: Forest Plan standards for snag and down woody debris management would be met under both the action alternatives through implementation of identified mitigation and monitoring. Also see response to Comment 2-4 and 7-20.

Comment 6-9: Is snag management just for the 5 years of this project or is it for the future as well?

Response: The standards for snag management are for both the short and long term. As stated in the EA, the project purpose and need was partially based on wildlife objective to move toward the historic conditions for those habitat groups that appear to be losing diversity due to lack of disturbance. These habitat groups include grass/ wet meadow (including aspen) and Douglas fir forest. Maintaining or increasing these habitat groups, including successional and seral stages, maintains viable native species populations. Old growth forest and snag habitat would remain well distributed across the landscape within all forest types. Also see response to Comment 6-8.

Comment 6-10: It is unclear whether snag management will be as per the Gallatin National Forest Plan or the Northern Region Snag Protocol? Please cite specifically what this means as per snags in any given habitat.

Response: The Gallatin Forest Plan Amendment 15 (1993) and the Northern Region Snag protocol identifies levels of snag retention needed to maintain viability of snag dependent species. The mitigation does mention the Northern Region Snag Management Protocol as an option. It recognizes that individual Forests have snag management standards or guidelines but provides optional snag retention management. Specifically, the recommendations for implementation and achieving snag management standards were considered in the mitigation and monitoring sections. Both protocols acknowledge that current conditions may not make it possible to meet the recommendations. Retention of all snags regardless of species or size is preferred if typical snag occurrence can not be attained. Snag habitat needs were considered for Townsend’s big-eared bat, flammulated owl, Northern goshawk, pine marten, and migratory birds. Forest Plan standards for snag and down woody debris management would be met under both the action alternatives. The mitigations identified in the EA to retain all available snags in

clumps rather than uniformly distributing them throughout harvest units is a recommendation from this document. Also see response to Comment 6-5.

Comment 6-11: Since most of these aspen-treatment areas have already been logged, it is unclear as to why more logging will improve aspen if past logging did not.

Response: It is true that past logging has occurred throughout much of the project area. According to field observations and recent stand exams, there appears to be three age classes of aspen at approximately 35, 65, and >100 years, which coincide with at least two past disturbances. Aspen is not a targeted timber harvest product and was “released” after every disturbance while conifers also regenerated. Now, the >100 year aspen are dying out and conifers are encroaching into aspen of other age classes as well. Additional conifer removal adjacent to aspen clones is necessary because adequate sunlight and soil warmth are essential components for successful aspen regeneration.

Comment 6-12: How can the agency implement a habitat management program of ecotones without any MIS for ecotone habitat, or monitoring to determine impacts?

Response: As stated in the EA, the project purpose and need was partially based on wildlife objective to move toward the historic conditions for those habitat groups that appear to be losing diversity due to lack of disturbance. These habitat groups include grass/ wet meadow (including aspen) and Douglas fir forest. Maintaining or increasing these habitat groups, including successional and seral stages, maintains viable native species populations. Grasslands, meadows, and shrublands occupied a larger percentage of the landscape and were more clumped, providing more edge habitat and associated diversity. By moving toward the desired condition for these habitat groups, edge habitat would be increase. This conclusion is based one methodology in the viability planning process is the filter analysis which is a system based (coarse) and species based (fine) approach to conservation (USDA 1997). The coarse filter objective is to retain representative habitats and seral stages and, therefore, the population viability for the majority of species within the diversity of habitats that the project area provides. A general fine filter desired condition is to maintain the diversity and population viability, at an individual scale, which may not be adequately managed through the coarse filter. Migratory birds were used as an indicator group to measure effects on those habitats such as grassland, forested, and aspen habitats potentially impacted by vegetation treatment. One species at risk that utilizes edge habitat is the flammulated owl, designated as sensitive. The affect of this project on this species and its habitat was analyzed even though it is not known to occur in the project area.

Comment 6-13: The flammulated owl is a classic edge species, and is associated with ecotones. What data does the Forest have to indicate burning ecotones will benefit this species?

Response: The Forest has no data to indicate that burning will benefit the flammulated owl. The only proposed burning is in Alternative 3, Unit J. The EA (pages A-51-52) describes potential beneficial effects to flammulated owl habitat based on known habitat preferences for snags and Forest/ grassland edges. Other treatments proposed (in aspen and Douglas fir) may also benefit flammulated owl habitat though individuals may be impacted in the short term.

There is no evidence of presence of this migratory owl in the project area. Also see response to Comment 6-12.

Comment 6-14: There was no analysis of the project's impact on deer, either whitetail or mule deer. Why not?

Response: Elk are the Management Indicator Species (MIS) designated as the indicator for big game habitat. The Forest Plan designated elk as a MIS for big game habitat under the premise that by managing for productive elk habitat, we will be managing for most big game species. These include mountain goat, moose, bighorn sheep, and mule deer; whitetail deer are unlikely to occur within the project area. Mule deer and moose are also present in the project area, evidenced by observed browsing on aspen. There were no key issues identified surrounding mule deer or moose populations or habitat.

Comment 6-15: The elk analysis did not address the status of bull elk in the associated elk herd, or how the project will effect elk vulnerability. Please include this in the final analysis.

Response: There is no concern for elk vulnerability in HD 315. According to results from Montana Fish, Wildlife, and Parks (MFWP) elk surveys for HD 315, the number of elk observed during the 2007 winter trend survey was the second highest count since surveys began in 1974 with 1,548 elk observed (Lemke, office memorandum). The population of elk is above the 2005 State-wide Elk Management Plan objective for HD 315 and the Crazy Mountain Elk Management Unit (EMU). In addition, the Plan calls for a bull count of 80 bulls in HD 315; winter trend surveys indicate bull numbers fluctuate from year to year (89 in 2004, 108 in 2006, and 66 in 2007). Regardless, according to the survey report, it may be misleading to base hunting season bull numbers on winter distribution data due to the fact that there is movement between HD315 and HD 580 and during some years, large group sizes prohibit checking for bulls. More importantly, annual bull harvest statistics confirm that elk count bull numbers are conservative. The MFWP is working with local landowners to increase public access to elk to increase the elk harvest. The hunting season has been within the Liberal Regulation category for antlerless elk and the Standard Regulation category for bulls since 2006. Also see response to Comment 6-17 and 6-18.

Comment 6-16: It is unclear why elk are not using this habitat. Is there something specific to the project area, such as a high density of roads and lack of cover that is affecting big game use?

Response: As disclosed in the EA, hiding and thermal cover are not limiting factors in the Smith Creek watershed. Use of the area by elk occurs during the spring, summer, and early fall seasons and during migration. Elk generally move out of the area before or during the early portion of the general hunting season (late October) because they move to lower elevation winter ranges. There were no areas of concern identified for big game species for this project. Elk population goals have been met for this EMU and are considered to be healthy and widely distributed. Also see response to Comment 6-15.

Comment 6-17: The analysis of habitat effectiveness is extremely vague. It is unclear why the open road density is not actually much higher than noted in the EA.

Response: The EA gave some basic information regarding habitat effectiveness. There was a confusing statement in the EA wherein the existing HEI levels (58%) were said to be well below the Forest Plan standard (70%), implying that a lower HEI value was better when actually the higher the HEI level is considered better. However, the issues addressing big game vulnerability and security cover were analyzed in the Gallatin National Forest Travel Plan. The Record of Decision for the Travel Plan identified which motorized uses would be allowed such that a road density standard becomes moot. The open road density for the Shields Travel Plan Area (TPA) ranged from 0.5 mi/mi² to 1.2 mi/mi² depending on which motorized routes were taken into consideration (which was one of four problematic areas regarding the HEI standard). It was recognized that the motorized use density would be more concentrated in the Smith Creek portion of the Shields (TPA) HD 315 even though many of the motorized routes are closed during hunting season. The implementation of this project would not change the open route density. Regardless, the HEI level is now fixed and the actual numerical level is final based on the analysis and decision made for the Gallatin National Forest Travel Plan.

Comment 6-18: There were no maps of security areas for elk in the EA. Do these unroaded blocks have to contain “contiguous cover” as per Hillis?

Response: The EA gave some basic information regarding security areas. The issue addressing big game security cover was analyzed in the Gallatin National Forest Travel Plan. An analysis using the Hillis model indicated that 36% of HD315 was elk security cover; recommendations are for at least 30% of the elk analysis unit to meet this model. Again, it was recognized that there was a higher level of motorized use concentrated in the Shields TPA but there is no concern regarding meeting elk population objectives for HD315. Also see response to Comment 6-17.

Comment 6-19: Since there does not appear to be hardly any pine marten habitat in this landscape, what does this infer for those species?

Response: Modeling of both preferred and marginal habitat indicated that pine marten probably occur in low densities. The State of Montana does not limit the harvest of pine marten and there is no concern for viability of this species so habitat condition is not the limiting factor. The project area is inherently not of high value to pine marten or other species dependent on spruce fir old growth due to the low evidence of spruce fir of all age classes in the Smith Creek drainage.

Comment 6-20: It is also unclear as to why the absence of the MIS goshawk, and its habitat, does not represent a significant impact of past logging.

Response: Modeled habitat revealed that currently there is limited habitat with optimal characteristics for goshawk in the project area. The effects analysis indicated that none of the alternatives, including the no-action alternative, would provide enough nesting habitat in the short-term. In addition, the old growth analysis indicated that the project area was over the Forest Plan standard for old growth and above historical levels. Over-mature Forest adjacent to

proposed treatments where there is a diversity of Forest and grassland conditions would not be affected and may serve as potential nesting habitat in the long-term. Treatment of aspen and/or the over-stocked Douglas fir may actually benefit goshawk long-term by increasing foraging habitat and associated prey base. Therefore, it was concluded that the proposed project would not result in adverse modification of goshawk habitat. Also see response to Comment 6-3, 6-4, 7-7, and 7-20.

Comment 6-21: Please map the elk migration routes through the analysis area in the EA and discuss how many current road distributions and densities may be impacting elk migration.

Response: Elk migration through the project area was not analyzed in depth in the EA. Migration was not considered a significant issue because there are no new roads or changes in access that would increase open road density proposed for this project. The Gallatin Forest Travel Plan made decisions on all motorized routes based on an in-depth analysis of vulnerability. Elk population levels in HD 315 are above the stated objective in the State-wide Elk Plan, and elk are generally out of the area before or during the early portion of the general season. Mitigation was identified to allow elk migration to occur with a minimum level of disturbance during this time. Also see response to Comment 6-17 and 6-18.

Comment 7-6: The EIS must disclose the range of populations of MIS or TES species, and the historic range of important habitat components and spatial considerations.

Response: The EA looked at historic vegetation patterns that contribute to habitat components and approximated quantitative levels of each. One objective from the WRA for the wildlife resource is to move toward the historic conditions for those habitat groups that appear to be losing diversity due to lack of disturbance. The project purpose and need was partially based on this wildlife objective. Maintaining or increasing these habitat groups, including successional and seral stages, maintains viable native species populations. This approach is in concert with the system based (coarse) and species based (fine) viability planning process (USDA 1997). The coarse filter objective is to retain representative habitats and seral stages and, therefore, the population viability for the majority of species within the diversity of habitats that the project area provides. A general fine filter desired condition is to maintain the diversity and population viability, at an individual scale, which may not be adequately managed through the coarse filter. Population management and objectives for fine filter species are specified by Montana Department of Fish, Wildlife, and Parks (for example, elk); the U.S. Fish and Wildlife Service (for example, gray wolf); and/or Multi-agency developed Conservation Strategies, Recovery Plans, or Management Plans. Also see response to Comment 6-12.

Comment 7-9: If so, what scientifically based rationale (i.e., research results) is the Gallatin NF relying upon to assert that maintaining that % old-growth on the Forest is enough to maintain population viability of all species needing old-growth habitat, when no baseline levels (pre-logging) have ever been disclosed?

Response: As presented in the EA, the proposed vegetation treatments would not have a substantial reduction in old growth in Compartment 221. Only 0.8% of the existing 21% old growth would be affected. The Forest Plan standard for old growth is also 10%. According to Losensky and the outputs generated as part of the Smith/Shields Watershed Risk Assessment

(WRA) (also see response to Comment 7-7), the amount of old growth projected to occur historically was approximately 10-15%. The WRA also concluded that the age class that is not represented today is the shrub and herb layers at the conifer sapling age. In addition, today there is more structure, i.e. two story and multi-storied stands are represented now more than historically. In both the Douglas fir and spruce/ subalpine fir/ lodgepole forest habitat groups the amount of old growth is currently similar to the historic. One methodology in the viability planning process is the filter analysis which is a system based (coarse) and species based (fine) approach to conservation (USDA 1997). The coarse filter analysis assumes that a representative array of ecological communities of sufficient size, structure and distribution will contain and maintain the vast majority of native species. The coarse filter objective is to retain representative habitats and seral stages and, therefore, the population viability for the majority of species within the diversity of habitats that the project area provides. Without any vegetation treatment and continued fire suppression, these habitat groups are at risk of stand replacement wildfire since the potential for large stand replacement fire grows as trees mature. Implementation of the project would maintain old growth within the projected historic levels thus meeting the objective of coarse filter analysis for viability. By offering a full range of variation in habitat, including successional and seral stages, viable native species populations would be maintained. Also see response to Comment 6-12.

Comment 7-10: The Gallatin NF must incorporate terms and conditions from a programmatic B.O. into a Forest Plan amendment or revision before projects affecting lynx habitat, such as this one, can be authorized.

Response: The EA disclosed impacts of the proposed project on lynx. At that time, the Northern Rockies Lynx Amendment was not completed. Since then, the Northern Region Forest Plans have been amended to incorporate this new direction for lynx management. The US Fish and Wildlife Service concurrently updated the species list by Forest to reflect those isolated mountain ranges that are considered unoccupied by lynx. The Crazy Mountains are considered unoccupied. The list for the Gallatin Forest now reflects this through the change to list lynx occurring south of I-90 only. Therefore, the BO and Forest Plan amendment referenced by this comment is not applicable.

Comment 7-11: The EIS also must adequately address the effects of logging on landscape pattern, which is essential for designation of critical habitat. The LCAS require that.

Response: The project would occur in unoccupied lynx habitat and the most current lynx management direction is not applicable. Also see response to Comment 7-10.

Comment 7-12: Please analyze the cumulative impacts on lynx from the additional new roads, additional skid trails, and other logging access routes to be constructed in the project area—roads/access routes that could be used by snowmobilers snowmobiles and other motorized recreational users, snowshoers, and cross country skiers long after the logging activities have stopped.

Response: The issue of both motorized and non-motorized transportation routes was addressed in detail in the Gallatin National Forest Travel Management Plan EIS, including cumulative effects of potential vegetation management projects. Also see the response to Comment 7-10.

Comment 7-13: The continued fragmentation of the Gallatin NF is a major ongoing concern. Again, this should be a landscape ecology analysis that looks at the larger picture of the fragmentation of habitat in surrounding concentric circles.

Response: The EA disclosed the results of the WRA done using a landscape model entitled SIMPPLLE (SIMulating Patterns and Processes at Landscape scales). The WRA indicated that there is less uniformity to non-forested habitat groups than what occurred historically. Grasslands, meadows, and shrublands occupied a larger percentage of the landscape and were more clumped and likely provided more edge habitat and associated diversity. In addition, the WRA approximated that the ratio of non-forested to forested habitats is inverse to what occurred historically, i.e. there is twice as much forest (pole size and larger) than non-forested habitat groups now than what occurred historically. The age class that is not represented today is the shrub and herb layers at the conifer sapling age. In addition, today there is more structure, i.e. two story and multi-storied stands are represented now more than historically. Consequently, the existing condition does not provide the same historic associated diversity for those species that prefer a mosaic of vegetation structure that grassland and shrublands provided.

Comment 7-14: The EIS must analyze and disclose these fragmentation effects on old-growth species' viability, caused by the current conditions and by the proposed project.

Response: The EA references the WRA which indicated that there is less uniformity to non-forested habitat groups than what occurred historically. This mix of grassland and shrubland structure is most likely different than historic patterns. The “bubble” of medium age classes for both the Douglas fir and subalpine fir/ lodgepole forest types explains the inverse relationship of the historic to current patch dynamics. Old growth forest would remain well distributed across the landscape within the historic extent and within Forest Plan standards. Also see response to Comment 6-12, 7-9, 7-13, and 7-23.

Comment 7-15: Since the management direction proposed for the goshawk in the project area differs significantly from the current best science, the agency has a responsibility to clearly explain to the public why their own management direction would work.

Response: See response to Comment 6-3, 6-4, and 6-20.

Comment 7-16: The EIS must consider the uncertain and precarious population status of the fisher, as described in Witmer, et al., 1998:

Response: As stated in the EA, the wildlife analysis was limited to those species that utilize all or a portion of the area impacted by the proposed project activity or for which comprehensive analysis is required. Fisher are not known to occur on the Gallatin Forest, is not designated as a sensitive species on the Gallatin, and therefore was not considered in this analysis.

Comment 7-17: Fire suppression, insect and disease suppression, and “salvage” logging policies of the Gallatin NF are the biggest threat to black-backed woodpecker population viability on the Forest, unfortunately in failing to create a conservation strategy the cumulative impacts of the Gallatin NF’s ongoing fire suppression policy will remain unexamined.

Response: It is true that black-backed woodpeckers prefer burned landscapes; fire suppression activity is likely one of the factors that has limited available habitat. The project area has very limited optimal habitat for this species (and the three-toed woodpecker), no impacts were anticipated, and the species was not addressed further.

Comment 7-18: The Gallatin NF provides inadequate management strategies to insure viability of the pine marten. The treatments proposed for this project would reduce the availability of prey species for the marten.

Response: The EA disclosed potential effects to denning and foraging habitat and indicated that the areas of suitable habitat affected by the proposed treatments were not contiguous and effects to individual home ranges would be minor. Prey species may benefit from prescribed burning in Alternative 3 and from slashing activity in logged units where down woody debris levels do not currently meet Forest Plan standards. Also see response to Comment 6-19.

Comment 7-19: The flammulated, boreal owl and the great gray owl are species of concern that are sensitive to logging and other management activities. The Gallatin NF provides inadequate management strategies to insure their viability

Response: The boreal owl is not a species of concern for the Gallatin Forest or for the State of Montana. The flammulated owl is designated as a sensitive species for the Gallatin but there is no evidence of their presence and preferred habitat (Ponderosa pine forest) is not present in the project area. Flammulated owls were discussed in the EA (also see response to Comment 6-13). Great gray owls are a State of Montana species of concern. Great gray owls were discussed in the EA under migratory birds and have been observed in the project area. Mitigation was identified for great gray owls to retain nesting structure opportunities and/or protect active nesting territories.

Comment 7-22: The EIS must also disclose the cumulative impacts of the ever-increasing motorized recreational use on wildlife species—both legal and illegal.

Response: There was an extensive cumulative effects analysis done for the selected alternative from the Gallatin Travel Plan EIS and Record of Decision. Past, present, and reasonably foreseeable projects like the proposed Smith Creek Vegetation Treatment were included as potentially contributing to a cumulative impact. In turn, the cumulative effect of the Gallatin Travel Plan implementation was addressed in this analysis. The proposed project would not build roads resulting in a change in road density, or make any changes to the transportation system. Any proposed work on roads, skid trails, or motorized trails are consistent with the Gallatin Travel plan decision.

Comment 7-23: The FS must tier the viability analyses for Sensitive species that would be impacted by the proposed project to a landscape analysis of species viability that would allow for some assurances to the public that species viability is currently being insured in spite of continued habitat destruction and/or alteration

Response: As disclosed in the EA, Samson (2006) recently conducted a region-wide conservation assessment for the northern goshawk, black-backed woodpecker, pileated woodpecker, flammulated owl based on a principle-based approach to PVA. For each species, he used peer-reviewed science, all known inventory/observation data, vegetation data from Forest Inventory and Analysis (FIA), scientific information on the minimum dispersal distances for species, their home range and body sizes, and well known conservation principles to assess the availability of suitable habitat, calculate a habitat threshold, and ultimately assess short- and long-term viability on each Forest in Region One. According to Samson (2005), short-term viability of these species in the Northern Region is not an issue. Population management and objectives for some fine filter species are specified by Montana Department of Fish, Wildlife, and Parks; the U.S. Fish and Wildlife Service; and/or Multi-agency developed Conservation Strategies, Recovery Plans, or Management Plans. Also see response to Comment 6-12 and 7-6.

Comment 7-25: The EIS must disclose a baseline or quantitative population data for Sensitive species and their habitats. The must obtain or maintain any past or current hard population or inventory or monitoring data for the Sensitive species at issue in the project area or for the Gallatin NF as a whole

Response: There were no sensitive species for which the determination was not “no impact” or “may impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the population or species”. There were no issues created with the project proposal that would lead to a determination of “will impact individuals or habitat with a consequence that the action may contribute to a trend towards federal listing or cause a loss of viability to the population or species”. Loss of individuals or habitat can be considered significant when the potential effect may be contributing to a trend toward Federal listing or results in a significantly increased risk of loss of viability to a species or population. The effects of the proposed project are minimal such that population viability is not a concern for any sensitive species. Also see response to Comment 7-6 and 7-23.

Water Quality & Fisheries

Comment 1-1. While there will certainly be short term increases in sediment, it is also recognized that the long term benefits will outweigh the short term impacts. I am pleased that the fisheries biologist will be involve in selecting trees to be retained in riparian harvest areas.

Response: As detailed in the EA on pp.3-24 through 3-27, sediment increases for the harvest activities are offset by road treatment mitigation. Sediment increases resulting from vegetation treatments are relatively short lived compared with long term sediment reductions resulting from road treatments. A limited amount of riparian harvest is proposed, primarily in areas where aspen stands are the desired future condition. For units where riparian harvest is proposed, a fisheries biologist will mark all trees that should be left to maintain LWD recruitment to streams and to protect riparian/floodplain stability.

Comment 6-22: It is unclear why treatments in riparian areas will benefit the riparian dependent species, or the Yellowstone cutthroat trout.

Response: The EA discloses that the water and fishery mitigation measures outlined on pp. 2-30 and 2-31 of the EA allow the proposed action to have *no effect* on riparian integrity or streambank stability (p. 3- 43). In the long term, implementation of Smith Creek Project Alternatives 2 & 3 would improve aquatic/riparian habitat (p. 3-51) by reducing road sediment, which is considered the primary cause of sediment increases in project area streams. The EA discloses that treatments in some units, including limited riparian harvest, are designed to stimulate old aspen stands which will increase vegetative biodiversity and improve habitat conditions for riparian dependent species.

Comment 6-23: If sedimentation initially increases from a project, even though future sedimentation may decline, how is this increase interpreted as a benefit to the cutthroat?

Response: The Smith Creek fuel EA does not state that the short-term sediment increases due to timber harvest will benefit Yellowstone cutthroat trout. Rather the EA discloses that the fisheries protection measures pp. 2-30 and 2-31 of the EA will allow the proposed action to have *no effect* on riparian integrity or streambank stability (p. 3- 43). In the long term, implementation of the Smith Creek Project Alternatives 2 & 3 would improve aquatic/riparian habitat (p. 3-51) by reducing chronic sediment inputs from roads.

Comment 7-1: Smith Creek has been listed by the State of Montana as Water Quality Limited Segment or stream. Page 19 of the EA states that this proposal is predicted to increase sediment yield. The decision should not be signed until the TMDL is fully developed and implemented.

Page 2-19 of the EA, the Water Quality issue statement, discloses that proposed vegetative treatments, along with the cumulative effects of existing roads, recreation, and private land development could have an adverse effect on water quality by potentially introducing additional sediment to Smith Creek and East Fork Smith Creek and tributaries. The potential sediment effects are disclosed on pp. 3-23 through 3-27 with the only short term potential increase due to the Meadow Creek burn which could have an estimate of 1.4 ton sediment increase (0.2 percent increase in Smith Creek) during the year of implementation. This increase is much too low to be measurable and well within Gallatin NF sediment standards (p. 3-27) and would drop to below pre-project conditions within 2-3 years of implementation. The comment is incorrect in stating that Smith Creek is listed as a WQLS. The 2006 Montana DEQ 303(d) list at <http://www.deq.mt.gov/wqinfo/nonpoint/NonpointSourceProgram.asp> does not include Smith Creek specifically as a listed segment. The Upper Shields River, however, is listed as explained on page 3-20. The Shields River TMDL has been in draft form since early 2007 and currently under review and finalization by the Montana DEQ. Final release is anticipated sometime in 2008. The USFS has been in coordination with the Shields River TMDL contractor and Montana DEQ through the TMDL process with the Smith Creek Fuels Reduction project. The release of the TMDL will not directly constrain USFS management but is a voluntary implemented watershed management plan intended to identify and mitigate water quality problems in order to comply with water quality standards. As explained on p. 3-20, the Smith Creek project is designed to be fully compliant with the Shields TMDL requirements which will include road, timber harvest, and fuel reduction technique BMP's.

Comment 7-28: The FS should always include an alternative that removes or fixes all the roads having design flaws, are otherwise contributing to soil and watershed problems, or are not needed for foreseeable management activities. The EIS must consider an alternative that gets streams in the project area to meet RMOs.

Response: As explained on pp. 2-19, 2-26, 2-39 and in Appendix A, Table A-24, Alternatives 2 and 3 and the associated road improvements to the Smith Creek system largely fixes the Smith Creek road having design flaws that contribute to soil and watershed problems.

Comment 7-30: Please disclose how the watershed analysis relies upon an ECA (Equivalent Clearcut Acres) or similar modeling procedure.

Response: The watershed analysis was focused on the R1R4 sediment model as the primarily water quality based constraint as explained on p. 3-22. The ECA model was used to calculate existing and potential water yield increase potential as detailed on p. 3-24. Projected water yield increases (0.24 to 0.3%) which are much too low to result in measurable increases, low flow reductions, or pose channel scour or stream scour sediment increase potential.

Vegetation, Old Growth, & Insect & Disease

Comment 2-4. In areas A1 and A2, only a few single trees will be left to satisfy the minimum required by law for wildlife habitat. This number is extremely low and in the long view, natural disturbances such as insect infestation or wind downbursts- quite common in this area- could remove many, if not all, of the remaining trees.

Response: The purpose of cutting conifers within these areas is primarily to increase the amount of quaking aspen regeneration found in Units A1 and A2. Aspen, being a relatively short lived tree that thrives where disturbance is frequent, are far less common today than historically occurred throughout this area. The intent is to enhance wildlife habitat and create a heat sink to reduce potential wildfire behavior by increasing aspen numbers through the removal of the majority of conifers. Conifers often reduce aspen numbers by shading out aspen (which are dependent on full sunlight). In addition, by disturbing the root systems of aspen clones with the cutting of adjacent conifers, as well as the incidental blow down of some aspen trees, ‘suckering’ (regeneration) of many young aspen shoots is expected. The Forest Plan Standard only asks that we leave 30 snags/trees per 10 acres within the harvest unit that are greater than 18’ tall and greater than 10” DBH). This standard will be met by our leaving of the majority of the existing aspen trees (large and small) after harvesting is complete and following the forest plan standard for snags by including a contract clause requiring the contractor to leave snags 18’ high and greater than 9.9” dbh (where safety is not of concern, which is the majority of the area).

Comment 2-5: Another major goal of the proposal is the control of insect infestations and disease through logging and thinning. In the Smith Creek study area, the proposal qualitatively describes the number of diseased/infested trees as low to moderately low. I fail to see that this goal can be considered a major reason to log extensively.

Response: The Forest Service position differs with these conclusions on two points. First, we disagree that extensive logging is being proposed. The amount of thinning proposed with this project in a compartment that contains over 14,487 acres of forested land is not by definition extensive. The thinning area equates to only approximately 6% of the forested area. Second, research conducted and documented by Region 1 (Rocky Mountain Region) entomologists indicates that it is preferred to prevent insect epidemics by treating areas where there is currently no and/or only low to moderate beetle infestations. Without treatment, the beetle infestations are currently and will continue to increase over the next several years. By thinning while the majority of the insect attacks are still endemic (low to moderate numbers), we are reducing the likelihood that epidemic outbreaks of insects will lead to unacceptable levels of damage and/or mortality to forested areas of lodgepole pine and Douglas-fir. Generating large numbers of dead trees within a short time period creates higher probabilities of severe wildfire. The approach of reducing potential insect damage by reducing the basal area of thinned stands has proven to be a prudent course of action. The following publications contain a good summary of thinning effects to beetle populations (Growth of Lodgepole Pine Stands and Its Relation to Mountain Pine Beetle Susceptibility by Mata, Schmid and Olsen, Project File, Vol. 4, Doc. 12-16 and Silvicultural Control of the Mountain Pine Beetle in Ponderosa and Lodgepole Pines in a presentation by Gene Amman, Project File, Vol. 4, Doc. 12-17).

Comment 6-2: The EA refers frequently to how effectiveness of the proposed management has been based on past monitoring. However no specific Forest Plan monitoring was ever provided in support of these claims. Please substantiate the validity of snag and old growth direction in the Forest Plan as a measure of environmental impact in your final EA.

Response: Project level decisions are not the appropriate scale to validate whether the snag numbers or old growth numbers specified in the Forest Plan are legitimate. That type and level of analysis is best left for the upcoming Forest Plan Revision. In other words, it is beyond the scope of this analysis. It can be said, however, that the numbers used in the current Forest Plan for old growth and snags still seem reasonable in light of current scientific literature. See the enclosed document entitled "Northern Region Snag Management Protocol" prepared by the snag protocol team for the UDSA Forest Service Northern Region, January 2000 (Project File, Vol. 4, Doc 12-19) and the answer for comment 7-7, below.

Comment 7-2: Attempting to “recover” forest conditions by intense mechanical manipulation is not maintaining ecosystem processes. We don’t believe the proposed management activities are designed to foster the *processes* that naturally shaped the ecosystem and resulted in a range of natural structural conditions.

Response: The Forest Service position agrees with your statement in part. However, it should be noted that what we are trying to accomplish with this project is a way to maintain an ecosystem that is and might be acceptable to what we as land managers view as satisfactory today and into the future. The proposed treatments are not attempting to emulate a landscape that looks exactly as it might have in historic times before logging, roadbuilding, and fire suppression occurred. The intent is to follow land management direction that allows for maintenance of a sustainable forest at multiple levels of concern. With this, exact adherence to historic processes is often unacceptable because (for example) wildfires that burn hundreds of thousands of acres in one season (as occurred historically) is for the most part socially unacceptable today. Fires of that scale would also create problems that could be unacceptable to a number of other natural resources (not the least being water quality).

Comment 7-5: There is no data that indicates that any shift due to increases in tree density is any way nearly as significant a factor in affecting resilience and the sustainability of historic ecological relationships as the past logging and road building has—and will to an increased degree, if the proposed activities are carried out.

Response: Again, the Forest Service position agrees with your statement in part. However, our knowledge concerning ecological relationships has increased and will continue to increase into the future. When the majority of the logging in the Smith Creek drainage occurred 20-60 years ago (many of the harvested areas were privately owned and acquired by the Forest Service in the early 1990s), ecological processes and how they interact was little known (nor cared about). Currently, we are much better informed regarding landscapes and the processes that create them. That being said, it is widely accepted that successful fire suppression efforts over the past several decades have contributed to forested areas that are more densely treed than what occurred historically.

Because we feel that increased forest density will become a “problem” (insect and wildfire issues associated with denser forests) we are proposing actions that will better move this landscape toward sustainability by thinning (which we agree is just one of many ways to modify a landscape).

Comment 7-7: Please disclose the best information on how much old-growth forest existed before logging, what the normal historical ranges have been, for each forest type or habitat type. Please disclose the best information on how much has been logged or lost due to road building.

Response: Specific to the analysis area, the best information concerning amounts of old growth forest that existed before logging and the normal historical range of old growth is best inferred from a report by B. John Losensky of Ecological Services, April 2002. The report, “Historic Vegetation in the Northern Rockies Lynx Amendment Area” (Project File, Vol. 4, Doc. 12-15) discusses forest types and age classes in year 1900 for all forested areas in Region 1 of the Forest Service, including eastern Montana. For eastern Montana (which includes the Crazy

Mountains), it was estimated that old growth amounts for all forest types (lodgepole pine, Douglas-fir for example) was approximately 10% to 11% of forested lands before logging, fire suppression, and road building. Interestingly, before project initiation, a landscape assessment was completed (using the model SIMPPLLE) where it was noted that historically, old growth levels may have been 10% to 15% of the forested lands prior to road building, fire suppression and logging (Project File, Vol. 2, Doc. 7-2 & Vol. 4, Doc. 12-18).

Comment 7-8: Please disclose the best information from Gallatin NF monitoring that proves the areas to be “treated” will retain characteristics meeting Regional or Forest Plan old growth criteria, or how they will at some specified time in the future.

Response: To clarify, the proposed thinning in old growth forest stands will remove approximately 30% to 50% of the basal area in any one stand by thinning from above and below (meaning that plans are to remove some trees in the overstory and some trees in the understory). In addition, the trees to be left those are generally the healthiest. Once thinning is completed, the significant factors that define old growth per Region 1 guidelines (large trees per acre above a certain age) will still be present and thus such stands could still be defined as old growth. However, because the mere harvest of trees in an old growth stand by thinning could alter old growth enough to make the structure and function of the stand suspect in the defining of old forest (even though the thinning does not remove the large trees that are old enough to qualify as old growth) we have purposely removed these stands from calculations for the amount of old growth present in Compartment 221 post-thinning and placed these stands in the mature forest category. The EA displays a 0.8% reduction of old growth in Compartment 221 with implementation of action Alternatives 2 and 3 (See page A-79 and A-80).

Comment 7-20: Please disclose how many old logging units in the project area are deficient in snags, another vital and necessary component of old-growth habitat.

Response: From observations noted while driving and walking throughout the analysis area, I would estimate that very few old logging units have what is the Gallatin National Forest’s Plan standard of 30 snags per 10 acres that are greater than 18’ and are greater than 10” dbh. But to clarify, Compartment 221 has approximately 3,100 acres of old growth and post-harvest will have around 2,996 acres (or 21% of the forested lands within Compartment 221), which is well above the 10% Forest Plan Standard for old growth).

Comment 7-21: The EIS must consider that snags may be cut down for safety reasons during logging operations (due to OSHA regulations). The EIS must disclose the amount of snag loss expected because of safety concerns and also skyline corridors and other methods of log removal.

Response: As some snags are removed for safety reasons, many other snags will be left. In order to more easily comply with OSHA safety standards and the Forest Plan Standard of 30 snags per 10 acres, snags will be clumped where such clumps exist (rather than leaving only individual scattered snags throughout), leaving them less susceptible to blowdown. In addition, the logging contract will include a clause requiring snags greater than 18’ and 9.9” dbh be left where safety is not an issue. Because of the condition of these stands and the fact we are removing at most 40% to 50% of the stand by thinning, adequate snag numbers left should be retained. No cable logging is planned for the project, a harvest system that makes snag retention

more difficult in comparison to helicopter and ground based logging systems. The planned thinning treatments associated with the project will allow for a much higher level of snag/green tree retention (considerably above the minimum) than would occur where regeneration harvests (clearcutting or seed tree/shelterwood) are planned.

Comment 7-24: The FS has admitted that the use of database habitat information, as the FS often relies upon for project analyses, is suspect: On average, how old is the Gallatin NF's database information?

Response: It is questionable that the Forest Service data is suspect, even though the initial database is roughly 20 years old. This is because tracking has occurred since this time where insect outbreaks have and/or are occurring. We have documentation where forest fires have burned and have mapped where logging has occurred. In addition, housing developments are identified along with updates to all forest stand sizes where small trees have grown into larger tree size categories (example seedling/saplings to pole size). Once the above updated information is gathered, the database is updated to reflect such changes. The reason a database might be considered suspect is because the question or questions one is attempting to answer requires data that cannot be answered with the type of data currently available (even with all the updates). The questions we wanted to answer and analysis completed for this EA could be answered with the updated database we used.

Comment 7-44: The FS often makes a case for logging as a way to reduce insect and disease damage to timber stands. As far as we are aware, the FS has no empirical evidence to indicate its "treatments" for "forest health" decrease, rather than increase, the incidence of insects and diseases in the forest.

Response: There are several written reports (two reports listed below do good a job of highlighting the effects to beetles when thinning occurs) that show thinning to be relatively effective in reducing mountain pine beetle or other insect numbers in stands thinned to the levels proposed for this project. If however, you are equating 'forest health' with thinning, the issue becomes more cloudy because "forest health" does not necessarily equate to just forest tree health. Forest tree health means healthy trees, whereas forest health refers to all aspects of a forest that by definition includes a multitude of things such as a 'proper functioning stream' or a forested landscape capable of housing a multitude of different animal species over hundreds of years. Forest health also includes (to name just a few) such areas of interest as fish health, diversity of insect numbers, soil microorganism numbers and type and on and on (Growth of Lodgepole Pine Stands and Its Relation to Mountain Pine Beetle Susceptibility by Mata, Schmid and Olsen, Project File, Vol. 4, Doc.12-16 and Silvicultural Control of the Mountain Pine Beetle in Ponderosa and Lodgepole Pines in a presentation by Gene Amman, Project File, Vol. 4, Doc 12-17).

Noxious Weeds & Livestock Grazing

Comment 7-31: The EIS must present information on the impacts of livestock grazing on the national forest land and on lands of other ownership in the project area.

Response: Impacts of livestock grazing on National Forest lands in the project area are analyzed on pp. A-11 through A-13 of the EA. Impacts of past, current, and future activities within the project area boundary are addressed in the cumulative effects for livestock grazing portion of the analysis. The active grazing allotment that lies within the project area is currently implementing adaptive management and mitigation methods to reduce livestock grazing impacts. This allotment is required to meet the terms and conditions of the Upper Shields Decision Notice (signed September 9, 2006) and the Forest Plan standards. For information on specific grazing practices, see the Upper Shields Allotments Environmental Assessment.

We have no specific records of grazing that occurs on lands of other ownership within this project area. This type of information is outside the scope of this project.

Comment 7-37: The EIS must disclose how the productivity of the land has been affected in the project area and forest wide due to noxious weed infestations, and how that situation is expected to change.

Response: Uncontrolled noxious weeds can decrease the productivity of the land. A shift from native vegetation to invasive weeds decreases wildlife forage, reduces species diversity, and increases soil erosion due to a decrease in surface cover. However, the Gallatin National Forest and Livingston Ranger district are implementing an integrated weed management strategy that minimizes the loss of native plant communities resulting from invasive weeds. This strategy for control and containment of noxious weeds on the Gallatin National Forest is contained in the Gallatin National Forest Noxious and Invasive Weed Treatment Project Final Environmental Impact Statement (June 2005).

There are approximately 5,240 acres of mapped weeds on the Livingston district, only 59 of which occur within the project area (approximately .01%). This is a very small percentage of the Project Area and the productivity of the land has not been affected. By continuing to implement a responsive and flexible integrated weed management program, we will be able to minimize impacts to our native plant communities, allowing for productive wildlife forage and species diversity. Some of the flexible management strategies we are utilizing include (but are not limited to) minimizing ground disturbance as to not create habitat suitable for the establishment of noxious weeds. See EA, pp. A-1 through A-10 for the Noxious Weeds analysis. Also see EA, pp. 2-33 & 2-34 for project design features and mitigation, and p. 2-40 for project related monitoring requirements.

Comment 7-38: Please disclose the results of weed treatments on the Gallatin NF that have been projected to significantly reduce noxious weed populations over time, or prevent spread. This is an ongoing issue of land productivity.

Response: The strategy for control and containment of noxious weeds on the Gallatin National Forest is contained in the Gallatin National Forest Noxious and Invasive Weed Treatment Project Final Environmental Impact Statement (June 2005). Weed treatments on the Gallatin National Forest include early detection, containment, and eradication of noxious weed infestations. These types of treatment have proven very effective.

Mapped noxious weed infestations in the Project Area that are along roads and trailheads have been treated annually with herbicides. Mapped infestations that are off of the roads and trail systems are treated as budget allows. Any mapped or newly discovered infestations within the project area will be pre-treated before any of the project activities begin. After the project is completed, the Forest Service will continue to monitor for any new infestations for several years. See EA, p.2-40 for the noxious weed monitoring plan.

Comment 7-43: The EIS must include the results of monitoring of noxious weed infestation from past management actions in the Gallatin NF, and give an indication of the effectiveness of any proposed noxious weed treatments to be carried out in the foreseeable future in the project area.

Response: The strategy for control and containment of noxious weeds on the Gallatin National Forest is contained in the Gallatin National Forest Noxious and Invasive Weed Treatment Project Final Environmental Impact Statement (June 2005). Weed treatments on the Gallatin National Forest include early detection, containment, and eradication of noxious weed infestations. These types of treatment have proven very effective and are outlined in the EIS.

Within the project area, mitigation measures are in place to prevent the introduction and spread of noxious weeds. Such mitigation include logging units when the ground is frozen as to not create habitat suitable for the establishment of noxious weeds, washing of vehicles between sites to prevent the spread of seeds, monitoring for new infestations for early eradication, and pre and post-treatments of known weed infestations. A combination of these practices will help control the spread of existing and prevent the establishment of new infestations.

Soils

Comment 2-2. The restoration activities that are being proposed are minimal ie covering roads and trails with woody debris and closing them to motorized use when logging is done. The proposal does not indicate that the Forest Service will regularly patrol these areas to prevent such activities.

Response: The EA specifies “Enough debris should be added to provide about 5 tons per acre (Graham, et.al., 1994), over the entire skid road. Debris should be placed to maximize barriers to ATV access, which will minimize use as ATV trails. There is potential for increased ATV use in

the area post-harvest, and the placement of woody debris would deter ATV use of these old trails. Increased ATV use could be a source of additional soil disturbance.

The addition of coarse woody debris would be beneficial for restoration of soil productivity. Addition of debris would increase the organic fraction of the soil after decay, and is a recommended activity for protection of soil productivity (Graham, et. al, 1994). Because there is high potential for increased weed infestation in portions of the Project Area (Units B and G), keeping soils undisturbed would also prevent the spread of weeds on these skid roads.

There is no formal patrol proposal. However, the Forest Service, as a matter of normal business, patrols its lands on a periodic basis. In fact, during the summer of 2007, an ATV ranger was assigned to regularly patrol the Smith Creek area.

Comment 2-3: The primary mitigation measure proposed is to conduct the logging during the winter when the road is frozen or is covered by at least eight inches of snow. In reality, with the extended drought we are experiencing has greatly reduced snowpacks and introduced repeated freeze/thaw periods. I doubt that a commercial logging operation can afford to lose those workdays.

Response: The continuing drought and warming climate may indeed affect logging operations. However, as specified here, no ground-disturbing logging operations will occur unless mitigation measures are met (App B, Page b-11), hence continuing soil protective measures even in the face of poor winter conditions.

Comment 6-24: It is not clear why the proposed mitigation measures will prevent the agency from exceeding regional soil standards for detrimental disturbance. What monitoring data is available on the Gallatin Forest to indicate that this will actually happen?

Response: To verify the predictions used in this analysis, and to provide information for future work, soil productivity monitoring will be undertaken on all harvest units using ground-based systems. This was not included in the Smith Creek project EA because it predated the official policy. However, it will be included in post-harvest activities. Monitoring will follow the current version of the Northern Region Soil Quality Monitoring Protocol (USDA Forest Service, 2007, or the current version at the time of sampling and authorized by Tidwell, 2007). It should be completed within two years of Activity Area completion. Relevant documents are:

Tidwell, Thomas. 2007. Soil disturbance measurement protocols. Letter from Regional Forester to Forest and Grassland Supervisors dated May 25, 2007, File Code 2550. Northern Region, U. S. Forest Service, Missoula, MT

USDA Forest Service. 2007. The 2007 Northern region soil quality monitoring protocol. Version 3.1, dated 06/15/2007. Northern Region, U. S. Forest Service, Missoula, MT.

The proposed mitigation measures include using winter logging (App B, page B-11). Winter logging has been shown to have a small effect on soils, based on scientific literature (EA p. 3-88) in the Rocky Mountains. Formal soil monitoring has been completed on the Gallatin Forest which supports this conclusion. The supporting document is Story, Mark. 2006b. Baldy Peak

Timber Sale Implementation Monitoring Review June 30, 2006, Gallatin N. F., USDA, Forest Service. This file is on the CD titled Gallatin Forest soil Quality Standard References dated 091207.

Comment 7-32: Furthermore, the EIS must cite the results of soil productivity monitoring. The EIS must deal with the very basic question: What are the quantitative effects of management activities on the productivity of the land?

Response: “Soil productivity” is not directly discussed in the EA. The Regional Soil Quality Standards are designed to quantitatively address soil productivity by limiting “detrimental” disturbance, and the justification for them is defined at the Regional level. Ongoing scientific research is being conducted to validate that Manual direction. It is our job on a project-specific basis to implement that quantitative direction (EA, p. 3-92). Successfully implementing that direction will, by inference protect “soil productivity”.

Comment 7-33: Therefore, the EIS must present “confidence intervals, standard deviations or standard errors in association with its conclusions” regarding the amount of activity area detrimental soil disturbance as well as all other resource impacts estimations or modeling.

Response: This information is available in the document “SmithPoint Form_PDRspreadsheet_051507(1).zip”. It is not included in the EA, but is available on request. The description of the statistical methods are in the EA:

USDA Forest Service. 2007. The 2007 Northern region soil quality monitoring protocol. Version 3.1, dated 06/15/2007. Northern Region, U. S. Forest Service, Missoula, MT.

This file is on the CD titled Gallatin Forest soil Quality Standard References dated 091207.

Comment 7-34: Please provide estimates of current detrimental disturbance in all previously established activity areas. The EIS must also discuss the link between current and cumulative soil disturbance in the Project Area to the impacts on water quantity and quality.

Response: Estimates of current detrimental disturbance for all proposed Activity Areas are in the EA, Table 3-20 (Ch 3, p. 3-87). Water quality models account for current and cumulative soil disturbance through sediment modeling (Ch 3, p. 3-22), which is based on the proxy of timber harvest history and roads.

Comment 7-35: The EIS must disclose the implications of all landtype limitations for detrimental soil impacts.

Response: The EA discloses both landtype characteristics and potential detrimental soil impacts for management by Activity Area in the EA, Table 3-19 (Ch 3, p. 3-86). Specific monitoring has been carried out a variety of soils and landscape features included in these landtypes through the Soil Survey, which provides the source for these potential impact estimates, when verified on the ground (EA, Ch 3, p. 3-85). The relevant document is:

Davis, C. E. and H. F. Shovic. 1996. Soil Survey of Gallatin Forest, Montana. Gallatin National Forest, Bozeman, MT. Maps 106, 110 and map unit descriptions

This hard-copy document is available in the project record and from Henry Shovic, Gallatin Soil Scientist, 10 E. Babcock, Bozeman, MT 59715.

Comment 7-36: The EIS must disclose the locations and sizes of proposed log landings, which is important because of the extreme amount of soil and other disturbance that occurs on these sites—they will be essentially industrialized for the long-term, despite “mitigation.”

Response: For the EA, landing locations are not specified, as that would occur during detailed sale layout. However, their effects are analyzed. They are included in the predicted effects of ground-disturbing operations and in monitoring plans (Ch 3, p. 3-85), using the Regional Soil Quality Monitoring standards and protocol. See Response to Comment 7-29. Though mitigation is specified, for soil quality standard purposes they are considered permanently detrimentally disturbed.

Comment 7-39: The EIS must disclose how the proposed project units would be consistent with Graham, et al., 1994 recommendations for fine and coarse woody debris, a necessary consideration for sustaining long-term soil productivity.

Response: Regional Soil Quality Standards do not call for a specific standard of CWD retention. In general, the soil scientist feels sufficient CWD is retained on Gallatin harvest sites. However, Graham, et. al., 1994 was used in determining CWD levels for restoration effectiveness on skid roads (Ch 3, Page 3-91).

Comment 7-40: Neither soil function nor soil quality have ever been monitored on the Gallatin NF following management activities. This has long-term implications for sustained timber production as well as the ecological relationships in the soil upon which timber production so very much depends.

Response: Neither soil function nor soil quality have been directly measured on the Gallatin Forest. Proxies for these properties have been measured, in accordance with Regional policy. See Response to Comment 7-29 for that policy. See the following references for monitoring using proxies on the Gallatin N. F.

Shovic, Henry. 2006. Soil Monitoring Report. Document for Gallatin National Forest, Box 130, Bozeman, MT.

Shovic, Henry. 1999. Review of Pole Gulch Timber Sale Soil Impacts. Memo to Gallatin National Forest, Aug. 18, 1999, Box 130, Bozeman, MT.

Shovic, H. F. and K. Birkeland. 1992. Gallatin National Forest 1991 soil monitoring program: summary report. USDA Forest Service, Gallatin National Forest.

Shovic, H. F. and G. Widner. 1991. Gallatin National Forest 1990 soil monitoring program: summary report. USDA Forest Service, Gallatin National Forest.

Story, Mark. 2006b. Baldy Peak Timber Sale Implementation Monitoring Review June 30, 2006. Letter to Big Timber District Ranger, Gallatin N. F., USDA, Forest Service

Story, Mark, 2006. Deer Creek Burns – Implementation Monitoring Review. Letter to Big Timber District Ranger, Gallatin N. F., USDA, Forest Service

These files are on the CD titled Gallatin Forest soil Quality Standard References dated 091207.

Fuels

Comment 2-1: This treatment is suggested despite the fact that this process has been shown to result in disturbances to existing biodiversity and to be detrimental to forest health in the long-term. There are now many examples that show areas previously logged may exhibit elevated rates of spread, fireline intensity, and soils heating impacts.

Response 2-1: It is correct that large clearcuts can have significant negative impacts to various resources. However, none of the units have proposals to remove all trees. All units, by design, will be left with a significant percentage of trees arranged in clumps to meet both wildlife habitat and fuel reduction objectives. The units with the largest number of trees to be removed are directly adjacent to private lands with both year round and seasonal residences. Removal of the majority of the conifer species in these units will result in increased aspen regeneration, which would benefit wildlife habitat and act as a heat sink to approaching fires. This would subsequently result in a natural deciduous fuel break along the shared boundaries.

It is also correct that decreased fuel loadings could result in greater rates of fire spread. With the existing conditions, the units most closely resemble Scott and Burgan's TL5 fuel model, which consists of highly loaded conifer litter. As a surface fire (under normal conditions), TL5 demonstrates low rates of spread with high surface fire intensity (Scott). However, when modeled under severe weather conditions, fire behavior increases exponentially. The additional crown component results in high rates of spread with high fire intensities. This greatly increases a fire's resistance to suppression efforts. If left in the current conditions, stands would continue to become denser resulting in lower canopy base height and increased crown bulk densities. The result would be lower tolerance for both the torching and crowning indexes. Stated simply, crown fires, under historic weather conditions, could initiate and be sustained at lower wind speeds with longer flame lengths and greater intensities.

Once implemented, my decision would open the existing crowns, resulting in increased grass growth. The stands would more closely resemble a savannah understory of grass and forbs with scattered clumps of conifers. The fuel model that represents the remaining available fuel is Scott and Burgan's GR4. GR4 is described by Scott and Burgan as moderate load dry climate grasses (Scott). The result of removing conifers and replacing them with the savannah type, where grasses are the major component, would result in an increase in overall rates of spread. The reduction in available fuel would however, have a significant effect on potential fire behavior including decreased flame lengths, an overall lower fire intensity, and decreased spotting potential. This would systematically reduce the threat of undesirable fire effects; the threat to both public and firefighter safety; as well as creating fuel loadings with acceptable fire behavior characteristics that promote safer fire suppression tactics.

Comment 3-1: We are against prescribed burning as there has been a history in the F.S. of prescribed burns getting out of hand. The EA describes mitigation and fire suppression for the burn, but years of drought have left the trees vulnerable and very susceptible to fire. Is there any other way to do this?

Response: 3-1: Historically, prescribed fire is a tool that has been utilized by all Federal land management agencies. Prescribed fire applications have been used for a multitude of resource objectives such as: brush disposal, wildlife habitat enhancement, slash disposal, etc. This year alone, Federal land management agencies successfully completed 22,878 prescribed burns totaling 2,856,939 acres. Of those acres, the Forest Service accounted for a little less than half of the total National Forest System lands treated (1,151,095 acres). None of those management ignited fires resulted in escaped fire situations.

Locally, the Gallatin National Forest regularly utilizes prescribed fire techniques for a multitude of projects. Annually, the Gallatin implements prescribed burning on approximately 3000 acres in various fuel types with various resource objectives. With the exception of the Iron Mountain Fire in 1990, no other escaped prescribed burns have occurred on the Gallatin. A detailed, site specific burn plan is developed for each project as described below in the Response to Comment 5-2.

It is correct that due to the drought and overstocking, stands of trees are currently more susceptible to fire kill as well as insects and pathogens. Fire historically played a significant role in the habitat types in Montana. The question is not when a wildfire will occur within an area, but rather what the frequency and severity of that fire will be. Within the Meadow Creek area, fire has occurred fairly frequently (approximately every 40 years) being utilized as both a thinning mechanism and a stand replacement agent. Low to moderate severity fires have converted dense pole-sized stands to fairly open conditions. Subsequently, light burning has helped to maintain the structure in a park-like condition. Historically, severe fires probably occurred in dense heavy fueled stands, which resulted in stand replacement. The vegetative maintenance characteristic of fire has an obvious effect on wildlife habitat and diversity through its effect on forage.

“The combination of opening up stands by killing some of the over-story, reducing competition by removing the understories, and rejuvenating sprouting plants through top kill, can significantly increase the availability of palatable browse and forage (Fischer).” Application of prescribed fire within the proposed Meadow Creek unit would meet both the fuels and wildlife objectives for the project. Furthermore, reduction in stand stocking levels would provide more water for trees that are left, thus improving their resilience to insect infestations and other forest pathogens.

Analyzing historical weather patterns and current fuels data, the burn plan for Unit J would be designed to meet the overall project objectives of improving wildlife habitat and reducing hazardous fuel loading by underburning the existing stands with low intensities and moderate severity. In meeting these objectives, prescribed fire techniques would utilize fire’s natural nutrient recycling mechanism and ecological processes. These processes would better protect the stands against a catastrophic wildfire, which could result in total deforestation. Other techniques, including harvest, could be utilized in theory, however, the absence of existing roads

and other resource considerations such as soil disturbance, flight distance to landings, topographical features, and proximity to private lands have rendered them not feasible.

Comment 5-2: I object to the contemplated burn in the Meadow Creek area believing it to be in violation of common sense risk/reward principles.

Response5-2: The proposed Meadow Creek Burn would be planned in such a way that the probability of escape would be very low. As apart of the burn plan, a comprehensive site specific “Risk” and “Potential Consequences” analysis is developed. The “Risk” and “Potential Consequences” ratings are used to help determine an overall management risk associated with the project. The “Technical Difficulty” ratings can be used to facilitate the planning process and help identify prescribed fire positions and skill levels necessary to safely and successfully implement the prescribed fire. The development and approval of a burn plan are the final decision criteria to actually implementing a prescribed fire. Prescribed burn plans cannot be implemented without the final signed approval of the District Ranger and can only be amended at that same level. In addition to the burn plan, prior to ignition, the District Ranger/Agency Administrator has to complete a Go/No-Go Pre-Ignition Approval. The Administrator’s Pre-Ignition Approval evaluates whether compliance requirements, prescribed fire plan elements, and internal and external notifications have been completed and expresses the Agency Administrator’s intent to implement the prescribed fire plan. If ignition of the prescribed fire is not initiated prior to the expiration date determined by the Agency Administrator, a new approval is required.

Comment 6-1: Since this landscape has already been heavily logged, it is not exactly clear how the past logging, in combination with the proposed additional logging, will cumulatively address fire management.

Response 6-1: It is correct that the Smith Creek area has had past harvest activity. In fact, some of the units to be treated have signs of past harvest activity. However, the sites appear to be highly productive. Within many of the proposed units, second growth has become well established in the understory providing for easy ground fire transition into the mature canopy thus leading to more intense fires with greater flame lengths. These types of fires, commonly referred to as crown fires, are not easily managed and have a resistance to control. The overriding the intent of the project is to improve public and fire fighter safety in the event of a wildfire. That being said, the reduction of potential fire intensity and subsequent flame lengths would reduce fire behavior to achieve the overall project objectives. As it pertains to fire management for the area, breaking up the vertical and horizontal continuity of the existing vegetation with the Selected Alternative would improve evacuation route safety zones and would provide for significant reductions in fire behavior, allowing emergency response personnel to make an effective initial attack. The overall management strategy, at least in the immediate future, would not change unless the Forest Plan is amended, which is outside the scope of this decision.

Comment 7-3: The EIS must disclose the ecological or economic cumulative impacts of fire suppression. A true no-action alternative would involve no fire suppression activities, since there's never been adequate NEPA on the Gallatin NF's fire suppression policy.

Response 7-3: The Gallatin Forest Fire Management Plan is not a decision based document. It offers operational parameters for both fire managers and line personal to implement the Forest Plan and/or other NEPA decisions. It provides a framework for management of wildland and prescribed fire as tools to safely accomplish both resource protection and management objectives on land administered by the Gallatin National Forest. The ecological and/or economic cumulative impacts are outside the scope of this decision.

Fuel References

Anderson, Hal E. 1982. Aids to Determining Fuel Models for Estimating Fire behavior Gen. Tech. Rep. INT-122. Ogden, Utah: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station.

Fisher, WC; Clayton, BD. 1983; NTIS Fire Ecology of Montana Forest Habitat Types East of the Continental Divide. , Pap. INT-141. Ogden, UT. US Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station

FMP, Gallatin National Forest Fire Management Plan 2006

Scott, Joe H.; Reinhardt, Elizabeth D. 2001. Assessing Crown Fire Potential by Linking Models of Surface and Crown Fire Behavior Res. Pap. RMRS-RP-29. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Scott, Joe H.; Burgan, Robert E. 2005. Stand Fire Behavior Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model. Pap. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station

Roads

Comment 2-7. Proposed restoration for the damage caused by commercial logging also causes concern. The direct responsibility for road maintenance and cleanup, slash burning, covering skid trails with debris will be with the lumber company conducting the harvest. Based on past experiences these activities are seldom conducted rigorously and are seldom adequately monitored by the Forest Service.

Response: All purchaser activities on National Forest lands and roads are covered by a comprehensive Timber Sale contract. The contract is administered by Forest Service Contracting Officers and field administrators. No portion of the Purchasers work is unattended by these individuals. Routine internal over-site of the Contracting Officer, the field administrators, and the purchaser activities are routinely monitored of contract compliance and any issues corrected. Between the contract and the internal controls, the over-site and compliance of timber projects has been thorough and complete.

Comment 3-2: We know it is not the FS responsibility to upkeep roads for residents. However since a change in use will occur during winter logging, there are situations that may become problematic.

Response: Winter use of the roads by the purchaser will be limited to what is needed for their use and any required mitigation determined by the decision, such as plowing parking area(s) for recreation and homeowner use to keep parking from congesting the open plowed roads and plowing turnouts so traffic can reasonably pass. Under this mitigation, any “situations” should be reasonably avoided. There have been no recent requests to plow the Smith Creek Road (or others in the area) by the homeowners at their expense for residential use. If a request were received, any mitigation necessary for safe use of the plowed road would be incorporated into any snow plowing permit.

Comment 4-1: We would ask that you reconsider adding a rock base to the East Fork of Smith Creek road known as 6635 where it passes through section 7.

Response: In order for this project to proceed as proposed, mitigations, such as adding base rock to specific sections of the East Fork Smith Creek Road #6635 are required to minimize sediment production from the road caused by the project activities. These mitigations were determined minimally necessary. Minimizing sediment is necessary to protect water quality, fish habitat, and roadbed deterioration.

Comment 4-2: We think that the main Smith Creek Road 991 could be snowplowed up to road 6636. If it were plowed just one time in the early spring it would prevent many of the problems created by hunters using the road. The entire concept of winter plowing needs exploration.

Response: It is unclear if the respondent meant snowplowing for this project or snowplowing outside of this project for residential and recreational use. The Forest Service anticipates that plowing the Smith Creek road will be a part of this project. If so, it is likely that snowplowing would last most of the winter until spring breakup (normally March 30 – June 1). This would achieve the desired results of taking the snow off the road for faster drying of the roadbed providing additional protection of the roadbed by spring users. If the respondent contemplated that spring snow removal would be a part of an annual routine for residential and public recreational use (including spring bear hunters), that is outside of the scope of this project and should be discussed with the District Ranger as part of the routine road maintenance program.

Comment 5-1: I believe the project would further damage the Forest Service leg of the Shields River Road

Response: Field administration of the project will determine if the purchasers use is causing unreasonable damage (beyond what can be corrected by routine maintenance) to the roadbed and will not allow activities that are damaging to the road, such as log hauling during spring breakup (normally March 30 – June 1). Road maintenance funds will be collected as part of this project for the main Shields River Road and used when routine maintenance is necessary. Some surfacing rutting during wet periods can always be expected on unpaved roads, but does not constitute unreasonable damage.

Comment 7-4: The Roads Analysis Process (RAP) for this area must be subject to the full public review process, in terms of providing alternative ways of managing the road system based on different management emphases.

Response: The Gallatin National Forest Travel Plan decision determined the management emphasis for the road system. Roads Analysis was an integral part of the planning and decision making process of the Travel Plan. No additional Roads Analysis is necessary for this project. Management direction on all roads used in this project is covered in the Travel Plan.

Recreation

Comment 2-8: Under this proposal Section 1 will suffer a very large portion of the groundbased logging. Section 1 has already been logged privately and still suffers from the effects. I strongly oppose any further disruptive and destructive ground-based logging and vehemently encourage the forest service to call for a detailed study through an EIS. Section 1 is very important to those of us living and recreating in the Smith Creek area.

Response: The proposed project will not change recreation opportunities in Section 1 of the Smith Creek project area. All fuel treatments located near recreational facilities will occur during the winter and thus will not impact summer recreational use of the facilities. Winter recreation will be disrupted in several areas, including the plowing of Smith Creek Road #991 but these disruptions will be temporary and not affect the long term recreational use of the area (see Smith Creek Vegetation Treatment EA – A-19). Past harvest activities have occurred in this area and have largely shaped the current recreational opportunities in the drainage. Recreationists use roads created for timber harvest to recreate with highway vehicles, ATVs, motorcycles, mountain bikes and horses (Smith Creek Vegetation Treatment EA – A-23). The proposed fuel treatments will not change the types of recreational activities but may impact the recreationists visual experience. Effects to the visual environment are discussed on page A-27 of the Smith Creek Vegetation Treatment EA. Removal of conifers in the meadow areas of Section 1 (Units A1 and A2) will result in a more open view in the short term.

Comment 7-42: The EIS must disclose the complete picture of the entire spectrum of recreational use in the project area.

Response: The Appendix A–Other Issues portion of the Smith Creek Vegetation Treatment EA contains a section concerning recreation (pp. A-14 – A-24). The full spectrum of recreational uses in the project area and the project’s effects on recreation is addressed.

Economics

Comment 7-27: The EIS must explicitly state the funding mechanisms that would be used to carry out all the post-logging slash (“fuel”) treatment. How certain would each funding source be, i.e., how likely is it that slash could remain untreated?

Response: The Present Net Value (PNV) is one indicator for comparing the difference between the present value of the revenues and present value of the expenses. EA, Table A-21, p. A-93 summarizes the project feasibility and financial efficiency for each alternative. The PNV's included the total stumpage revenue (PNV1) and all costs associated with timber harvest plus ecosystem restoration activities (PNV2). EA, Table A-22 (p. A-96) itemized the proposed ecosystem restoration activities.

Based on these comparisons, Alternatives 2 and 3 show a positive PNV for the harvest of timber. It is important to note that predicted bid rates may fluctuate by the volatility of the timber market and should be considered rough approximations of future conditions. Positive timber revenues would be re-invested to complete thinning non-commercial small diameter products and slash disposal. This work could also be completed by Forest personnel or contracts. In addition, funds could be obtained from cooperators, other agencies, and local donations to complete activities.

Comment 7-45: The economics analysis must include an itemized disclosure of costs vs. benefits, and a Present Net Value (PNV) discussion.

Response: EA, Table A-21 (page A-94) and Table A-22 (page A-96) displays the Present Net Value for all activities associated with the project. The PNV was calculated using the Quicksilver program, a program for economic analysis of long-term, on-the-ground resource management projects. Costs for sale preparation, sale administration, regeneration, and ecosystem restoration projects by alternative were included. A four percent discount rate (exclusive of inflation) was used over the five-year project lifespan (2007-2011).

EA, Table A-23 (page A-96) displays the total employment and labor income projected as a result of implementing the project. The analysis calculated the jobs and labor income associated with timber harvest, reforestation, and restoration activities (EA, p. A-95) by alternative.