

Appendix A – Comments on the DEIS and Forest Service Response

Public Involvement Summary

The Notice of Intent was published in the *Federal Register* on January 13, 2010 (75 FR 1748). The Notice of Intent asked for public comment on the proposal to be received by February 22, 2010. The agency sent about 700 letters explaining the proposal and asking for comment to interested individuals, groups and agencies on January 15, 2010. In addition, as part of the public involvement process, we held an open house on February 3, 2010, and project information was available on the Forest website at www.fs.usda.gov/helena. The project has been listed in the Forest’s Schedule of Proposed Actions since April 1, 2010. The DEIS Appendix A included the content analysis of the scoping comments received (USDA Forest Service 2013).

Notice of Availability

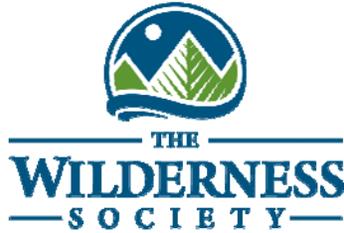
The Notice of Availability of the DEIS was published in the *Federal Register* on May 3, 2013 (78 FR 26027). The Notice of Availability started the 45-day comment period on the DEIS. We sent about 240 letters and electronic mail attachments announcing the availability of the DEIS to interested and affected individuals, groups and agencies on April 30, 2013. A legal notice announcing the opportunity to comment on the Stonewall Vegetation Project DEIS was published in the *Helena Independent Record* on May 6, 2013.

We received a total of seven comment letters on the DEIS. Table A-1 lists the names of the individuals, organizations, and agencies that provided comments during the opportunity to comment period for the DEIS for the Stonewall Vegetation Project.

Table A- 1. Responded to the Stonewall Vegetation Project DEIS opportunity to comment

Name
Travis Belote, The Wilderness Society
Gary Burnett and K.D.Feeback, Lincoln Restoration Committee
Julie DalSoglio, United States Environmental Protection Agency, Region 8, Montana
Robert Stewart, United States Department of Interior, Office of Environmental Policy and Compliance
Michael Garrity, Alliance for the Wild Rockies and Sara Johnson, Native Ecosystem Council
Michael Garrity, Alliance for the Wild Rockies and Sara Johnson, Native Ecosystem Council
Steve Kelly, Montana Ecosystems Defense Council
Sarah Johnson, Native Ecosystem Council - Michael Garrity, Alliance for the Wild Rockies

This appendix includes a copy of the letters received commenting on the DEIS, with comment topics coded, followed by the Forest Service response.



June 17, 2013

Amber Kamps
 District Ranger
 1569 Highway 200,
 Lincoln, MT 59639

Dear Ranger Kamps,

Comment #1

Thank you for the opportunity to review the Draft Environmental Impact Statement of the Stonewall Vegetation Project. Overall, we appreciate the commitment to collaborative approaches to project development you and your staff have used in planning this project. We believe engaging stakeholders of diverse perspectives early in project planning has given many interested parties an opportunity to learn about resource issues and provide feedback.

We view one of your overall objectives to restore fire regimes as consistent with our view on the importance of safely returning fire to the landscape. We recognize the concerns of crown fire risk near communities and support fuel reduction near homes. We believe the use of prescribed fire in the backcountry areas will provide landscape heterogeneity that may prepare the landscape for future fires, especially under future climate conditions. We hope these treatments will increase the decision space and social license for allowing fire to play its ecological role on the landscape in the future (as suggested on page 194) and lower fire management costs, as articulated in the Forest Landscape Restoration Act.

Comment #2

We recognize that opening the canopy for fuels reduction can lead to decreased wildlife values associated with closed canopy or multistoried forests. We are concerned about effects the project will have on wildlife habitat, particularly security for elk, and see adjustments with Alternative 3 as positive. We recognize that effects of widespread mountain pine beetle (MPB) have eliminated canopy cover and complicated the ability to conduct fuels reduction projects. To conduct fuels reduction projects in compliance with current elk security standards our understanding is that MPB mortality (and associated canopy reduction) in some parts of the forest is so extensive that even the closure of all roads would still not address compliance for a subset of elk herds using the district. Additional data collection and analyses including modeling

Comment #3

of secure habitat characteristics may be informative for a forest plan amendment. Specifically, it seems the effect of MPB mortality on elk security needs additional scientific inquiry, which may lead to better understanding of the role of horizontal hiding cover, downed wood, forage, and other forest characteristics in maintaining elk security or habitat quality in stands with high levels of MPB mortality and high road densities. Overall, we believe investments in monitoring of wildlife species before and after treatments should inform future management decisions.

The complex relationships between closed canopy (e.g., hiding cover) and open canopy (e.g., reduced crown fire risk) values and patches, their composition and arrangement across landscapes, and their dynamics through time may require new approaches to modeling and active adaptive management. Specifically, we believe modeling and assessment efforts that incorporate wildlife habitat and fire simultaneously (e.g., the simulation model FireBGCv2, Keane et al.

Comment #4

Comment #5

2011, RMRS-GTR-255, and see also methods described in Hessburg et al. 2013, *Sustainability* 5: 805-840) could improve forest restoration project planning. Using these new tools and approaches should provide the best available science to ensure forests remain “diverse, resilient, and sustainable.” Please consider leveraging these new modeling tools for future projects, including any forest plan amendments. We also believe new science on spatial heterogeneity of fuel reduction and restoration projects could inform new approaches that meet multiple objectives of reducing crown fire risk while maintaining important levels of canopy closure or horizontal hiding cover (*sensu* PSW-GTR-237, chapter 14, and see Churchill et al. 2013, *Forest Ecology and Management* 291: 442-457). At landscape scales, heterogeneity of patches with closed and open canopies may be one way of managing for multiple values and we see Alternative 3 as an improvement over Alternative 2.

Comment #6

We are happy that the southwestern Crown of the Continent (SWCC) monitoring efforts have already been conducted in the Stonewall Project and hope this effort will continue in the future. The integrated forest monitoring project that collects data on wildlife habitat characteristics, soil conditions, forest composition and structure, understory plant composition, and abundance of non-native invasive plants began pre-treatment data collection in 2012 on select units of the Stonewall Project. We hope these data and resulting analyses will be useful to you, your staff, the Lincoln Restoration Committee, and the SWCC. We further hope the data serve as a means of increasing our understanding of impacts of treatments and inform future management adjustments. We would like to see the SWCC be engaged in monitoring the impacts of the temporary roads on vegetation and soils built and obliterated under either Alternative 2 or 3. Please let us know how we might help develop a monitoring project for this issue.

Thank you again for the opportunity to comment.

Sincerely,
/s/ Travis Belote

Research Ecologist
The Wilderness Society
Bozeman, MT 59715
travis_belote@twc.org
(406) 586 1600 x. 110

cc

Peter Aengst
Regional Director

Anne Carlson
Climate Associate

6/17/13 Belote, The Wilderness Society Letter

Comment #	Response	Assigned
1	Comment supporting collaborative approaches noted.	NEPA
2	Comment noted regarding concern of reduction in closed canopy forest on wildlife, especially security for elk, and alternative 3 adjustments as positive. Alternative 3 was developed to address project objectives, while reducing short-term effects to big game by maintaining greater levels of cover and closed canopy habitat. The big game analysis has been updated, and incorporates additional field information, in chapter 3 of the FEIS.	Wildlife – wildlife
3	There are many unknowns related to the effects of MPB mortality on elk. As a result elk hiding cover surveys were conducted in areas affected by MPB mortality to identify the level of cover provided, and to validate our assumption that the pre-disturbance condition was applicable for describing functional attributes of hiding cover. We also conducted field surveys to evaluate elk hiding cover within many of the proposed harvest units affected by MPB and will use this information to implement PDF's that retain buffers and which would provide cover during treatment. Future monitoring of stands affected by MPB mortality may be helpful in assessing elk use, however, anticipated effects are based on site specific conditions and available monitoring information. The big game analysis has been updated, and incorporates additional field information, in chapter 3 of the FEIS.	Wildlife monitoring
4	Fire modeling considers wildlife habitat vegetative conditions such as stand density and canopy closure. Methodology is discussed in chapter 3. The proposed action was developed after Forest resource specialists reviewed watershed conditions and identified opportunities to address fuels concerns and restorative treatments with the aim to create more resilient forested stands across the project area landscape. Although different tools were used, including field review, this landscape approach for the project area had similar aims as noted in Hessburg et al. 2013. Future analyses conducted on the Forest will consider available information, models and discuss methodology used.	Fire/Fuels – fire modeling
5	Restoration treatments are designed to improve vigor of various species across the landscape. Comment noted regarding alternative 3 as an improvement over alternative 2.	Fire/Fuels - fire
6	The Lincoln Ranger District will continue to work with the SWCC, including seeking joint monitoring efforts.	Soils – SWCC soil monitor

RESTORING MONTANA’S FORESTS



LINCOLN RESTORATION COMMITTEE
c/o P.O. Box 1715
Helena, MT 59624-1715

A NEW APPROACH

June 17, 2013

Ms. Amber Kamps, District Ranger
Lincoln Ranger District
Helena National Forest
1569 Highway 200
Lincoln, Montana 59639

Dear Ms. Kamps:

As you know, the Lincoln Restoration Committee (LRC) is a group of private citizens reflecting diverse community interests. We formed in the fall of 2008 with the purpose of developing recommendations for restoration projects on the Lincoln District of the Helena National Forest. The work of our group is supported by the Montana Forest Restoration Committee (MFRC), which in 2007 adopted 13 restoration principles for on-the-ground use. The LRC's monthly meetings have been devoted to assessing where and how these principles might be applied in ways that are beneficial to the Lincoln community, the broader public, and the health of the land.

Comment #1

The LRC believes that the decisions made in the Stonewall Vegetation Project Draft EIS are closely related to the MFRC Principles and to our purpose as a committee. These comments are based on our understanding of the Montana Forest Restoration Principles and the information that is currently available to us regarding the proposed activities in the Stonewall Vegetation Project Draft EIS. We hope that this comment letter is one of many steps in an ongoing,

Comment #2

productive and positive dialogue that we hope will continue through all phases of project design, implementation and post-treatment monitoring.

Comment #3

As a committee, we sincerely thank you for devoting a significant amount of staff time and expertise in hosting multiple presentations and site visits for members of the LRC. These events were exceptionally well-organized, informative and highly relevant to the MFRC Principles. We are truly grateful for the professionalism and the clear commitment to collaborative forest restoration efforts you, the rest of the Lincoln Ranger District team and the Interdisciplinary Team have demonstrated in this effort.

Comment #4

The members of the LRC view the restoration potential described in the Stonewall Vegetation Project Draft EIS as significant and we are impressed with the integration of the restoration principles into your scoping notice. In our view, Alternative 2 in the Stonewall Vegetation

Comment #5

Project Draft EIS provides the best balance of restoration opportunities, including significant opportunities for restoration work impacting Ponderosa pine, aspen, various water courses, as well as, and separately, fuels thinning in the Wildland Urban Interface. We appreciate the efforts of Alternative 3 to incorporate wildlife habitat restoration in the project to further enhance the restoration benefits. We feel that given a field review, we might find a balance

Lincoln Restoration Committee
Comments on Stonewall Vegetation Project Draft EIS
June 17, 2013

between vegetative restoration and the broad range of wildlife habitat restoration opportunities.

Comment #6 The Lincoln Restoration Committee requests we meet with you and other staff for a field review in order to advance a forest restoration project with the goal of achieving all of the following goals, consistent with the Montana Forest Restoration Principles:

- Restore functioning ecosystems by enhancing ecological processes;
- Apply an adaptive management approach;
- Use the appropriate scale of integrated analysis to prioritize and design restoration activities;
- Monitor restoration outcomes;
- Reestablish fire as a natural process on the landscape;
- Consider social constraints and seek public support for reintroducing fire on the landscape;
- Engage community and interested parties in the restoration process;
- Improve terrestrial and aquatic habitat and connectivity;
- Emphasize ecosystem goods & services and sustainable land management;
- Integrate restoration with socioeconomic well-being;
- Enhance education and recreation activities to build support for restoration;
- Protect and improve overall watershed health, including stream health, soil quality and function and riparian function; and
- Establish and maintain a safe road and trail system that is ecologically sustainable.

Comment #7 We accordingly request that you review our recommendations in relation to the Montana Forest Restoration Principles and all legal and regulatory requirements including the National Environmental Policy Act and National Forest Management Act.

We want to take this opportunity to thank you for the technical support you and your staff have provided during our efforts in developing the Stonewall Vegetation Project Draft EIS.

Sincerely,



Gary Burnett
Lincoln Restoration Committee, Co-chairs



K.D. Feedback

cc: Bill Avey, Acting Forest Supervisor, Helena NF
Gordy Sanders, MFRC Chair
LRC members

6/17/2013 Burnett Feedback Letter

Comment #	Response	Topic
1	Support comment noted.	NEPA
2	Support comment noted. See responses to comments 5 and 6 pertaining to ongoing collaborative discussions.	NEPA
3	Support comment noted.	NEPA
4	Support comment noted.	NEPA
5	Support for alternative 2 noted. Support for alternative 3 noted with concerns to be discussed on a field review pertaining to finding a balance between vegetative restoration and the broad range of wildlife habitat restoration opportunities. Helena National Forest, Lincoln Ranger District staff scheduled a field trip with interested parties on 8/7/2013 to discuss the Stonewall Vegetation Project.	NEPA
6	Helena National Forest, Lincoln Ranger District staff scheduled a field trip with interested parties on 8/7/2013 to discuss the Stonewall Vegetation Project.	NEPA
7	Recommendations received have been considered for the Stonewall Vegetation Project.	NEPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th St, Suite 3200
HELENA, MONTANA 59626

Ref: 8MO

May 28, 2013

Ms. Amber Kamps, District Ranger
Lincoln Ranger District
Helena National Forest
1569 Highway 200
Lincoln, Montana 59639

Re: CEQ 20130109; EPA comments on Stonewall Vegetation
Project DEIS

Dear Ms. Kamps:

The Environmental Protection Agency (EPA) Region VIII Montana Office has reviewed the Draft Environmental Impact Statement (DEIS) for the Stonewall Vegetation Project prepared by the Lincoln Ranger District, Helena National Forest. EPA's review has been conducted in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act, and the Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500-1508. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major Federal agency action. EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document.

The EPA recognizes the forest health, hazardous fuels/wildfire risk, forest composition and structure, and insects/disease concerns in the Stonewall Project area, and the Helena National Forest's (HNF) need to improve vegetative conditions and move the landscape towards the desired conditions specified in the Forest Plan. Only two action alternatives were evaluated in detail in the DEIS; Alternative 2 involving treatments to approximately 36 percent of the project area, including timber harvest on a total of 3,099 acres (regeneration harvest, intermediate harvest, and precommercial thinning); 2.6 miles of new road construction; and 8,041 acres of total burning (pile burning, jackpot burning, broadcast burning, and underburning); and Alternative 3 involving treatments to approximately 27 percent of the project area, including timber harvest on 2,298 acres; 0.4 miles of new road construction; and 6,155 total acres of burning. Alternative 3 was identified as the preliminary preferred alternative in the DEIS.

Comment A The rationale for identification of Alternative 3 as the preliminary preferred alternative was not presented in the DEIS. The DEIS indicated that modifications in alternatives and/or revision in the preferred alternative may be considered for the FEIS depending on DEIS comments received and/or new information. We note that the potential environmental effects of both action alternatives were often discussed together, not disclosing many differences in environmental effects between the two action alternatives, or providing much basis for choice among the action alternatives.

On a preliminary basis, however, the EPA tends to agree with the HNF's preliminary identification of Alternative 3 as the preferred alternative, since Alternative 3 involves less new road construction than Alternative 2 (i.e., 2.2 miles less new road construction); lower amounts of timber harvest and burning (including less burning within inventoried roadless areas); and appears to involve a lesser level of impacts to habitat for threatened, endangered and sensitive species and designated critical habitat, management indicator species, big game hiding cover, thermal cover, and security cover. We encourage minimization of new road construction, since roads are often the major anthropogenic sediment source adversely affecting hydrology, water quality, and fisheries; and roads and motorized uses can also adversely affect wildlife habitat, connectivity and security, and air quality, and promote spread of weeds and cause other adverse ecological effects.

Comment B Although we also note that the higher levels of harvest and burn treatments with Alternative 2 may better meet vegetative objectives and fuel reduction/fire risk reduction objectives. Alternative 2 may also improve tree species diversity, age class diversity and tree resistance to insects and diseases more than Alternative 3 as a result of additional reductions in timber stand densities. Land management decisions involve environmental and resource management trade-offs (i.e., trade-offs in impacts among vegetation treatments, restoration of vegetative conditions, fire risk and fuels, forest health, wildlife, water quality and fisheries, air quality, weed spread, and other resource impacts). We recommend that additional discussion regarding the various trade-offs among alternatives be included in the FEIS to provide a clearer basis of choice among options for the decisionmaker and the public, and to more clearly explain the rationale for selection of the preferred alternative.

We are pleased that a relatively small amount of new roads are proposed with the action alternatives, and that these roads would be obliterated immediately following timber removal, and most new roads would be located in upland areas away from streams. We also appreciate the commitment to conduct extensive road maintenance and BMP improvements on project haul roads to reduce road sediment delivery to surface waters. Forty-eight miles of road used for Alternative 2 and 44 miles of road under Alternative 3 would receive BMP improvements (i.e., surface grading, re-establishment of drainage features -grade dips and ditch-relief culverts-, replacing undersized culverts, and application of sorted gravel at stream crossings and other sediment delivery points).

Comment C As you know segments of the Blackfoot River downstream from the project area are designated as water quality impaired and included on Montana's Clean Water Act, Section 303(d) list of impaired waters. It is important that the HNF coordinate with Montana Dept. of Environmental Quality (MDEQ) Total Maximum Daily Load (TMDL) program staff to assure that the MDEQ considers the proposed Stonewall Vegetation Project to be consistent with the Blackfoot Headwaters Sediment TMDL and Water Quality and Habitat Restoration Plan (e.g., contact MDEQ staff such as Mr. Robert Ray at 406-444-5319 and/or Mr. Dean Yashan at 406-444-5317). We also encourage review of the MDEQ's pamphlet, "*Understanding the Montana TMDL Process*," <http://deq.mt.gov/wqinfo/TMDL/default.mepx> .

The DEIS acknowledges that some sediment delivery may occur over the short-term during road construction and road maintenance, but over the long-term reductions in sediment delivery by 2 tons per

year are estimated to result from proposed road maintenance and road BMP improvements. We are pleased that a goal of no net sediment increase or preferably, a reduction in sediment delivery from current levels for the proposed project has been set for the project.

Comment D We do have some concerns regarding the adequacy of funding to properly maintain road BMPs over the long-term for roads within the Stonewall Project area. Funding for road maintenance is often limited, and there is a significant backlog of road maintenance needs on National Forests (Source: “Rightsizing” the Forest Service Road System Part I: Road Trend Analysis, March 22, 2007). Older roads were often built with outdated BMPs (those dating from the 1950s to the mid-1970s) that need regularly scheduled repair and upgrading. Roads need to be routinely inspected and road BMPs evaluated in regard to their effectiveness, and BMPs improved and/or maintained as needed over time to remain effective. The DEIS states that many of the existing roads in the project area are known sources of sediment to streams and characterized as moderate-to high-risk in the HNF Roads Analysis Process. A continuous and effective road maintenance program is needed to avoid delivery of excess road sediment to the Blackfoot River downstream.

Comment E The DEIS also states that long-term sediment reductions would result from road obliteration. However, it is not clear if any obliteration or decommissioning of existing roads is proposed. The DEIS seems to indicate that the only proposed road obliteration is the obliteration of the 2.6 miles or 0.4 miles of new temporary road proposed with Alternatives 2 and 3, respectively. It is not clear if other road decommissioning or obliteration is proposed (i.e., obliteration of existing roads). We recommend that this be clarified in the FEIS.

Comment F We fully support decommissioning of roads, since as noted above roads often impact water quality and many roads cannot be properly maintained resulting in road sediment transport to streams. Reductions in road density especially road stream crossing density has often been correlated with improved aquatic health. Lower road densities are also often associated with improved wildlife habitat, connectivity and security. In addition, there is often a relationship between higher road density and increased forest use and increased human caused fire occurrences. Reduction in road density, therefore, may also reduce risks of human caused fires, which could be important in an area with high fuels/fire risk and/or wildland/urban interface issues. We encourage the HNF to consider decommissioning existing roads that are causing resource damages and that may be difficult to maintain. We encourage closure and/or decommissioning of roads near streams with many stream crossings, since removal of these roads are more likely to have water quality benefits than closure and decommissioning of roads on upper slopes and ridges.

Comment G The DEIS indicates that three reaches of Keep Cool Creek and one reach of Beaver Creek were assessed as functioning-at-risk (FAR), yet little discussion of the causes for these FAR ratings was provided. We recommend that the causes or reasons for the “functioning-at-risk” stream reaches be discussed further in the FEIS. The DEIS states that the FAR stream segments are expected to remain in that condition under the action alternatives. If there are anthropogenic causes on National Forest lands for these FAR ratings (e.g., grazing or road management), we encourage the HNF to include additional actions to help mitigate the adverse effects on stream functions occurring in these FAR stream segments.

Comment H It also appears that some harvest units with high detrimental soil disturbance (DSD) exceeding 15% would not show a net improvement in soil quality (i.e., units 14, 15, 59, 65 would not show reductions in DSD). We recommend that additional information and/or discussion be provided in the FEIS to show how treatment units exceeding 15% DSD, with no decrease in DSD after the project, would be consistent with the Regional Soil Quality Standards, which require a net improvement in soil quality in units exceeding 15% DSD. Perhaps additional active soil restoration may be needed in such units.

Comment I Finally, it would be helpful if an improved waterbody/watershed map showing locations of all project area waterbodies in relation to proposed roads and treatment units be included in the FEIS. A clear waterbody/watershed map showing locations of all waterbodies in relation to proposed management activities was lacking in the DEIS.

The EPA's further discussion and more detailed questions, comments, and/or concerns regarding the analysis, documentation, or potential environmental impacts of the Stonewall Vegetation Project DEIS are included in the enclosure with this letter. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). EPA concerns involve the potential for adverse environmental effects from new road construction and availability of funding to properly maintain existing and proposed new roads. We also recommend improved disclosure regarding functioning-at-risk stream segments, road decommissioning, and road locations and management activities relative to streams. A copy of EPA's rating criteria is attached. We recommend additional analysis and information to fully assess and mitigate all potential impacts of the management actions.

The EPA appreciates the opportunity to review and offer comments on the DEIS. If you have any questions please contact Mr. Philip Strobel of our NEPA Review and Compliance Group in Denver at 303-312-6704 or via e-mail at strobel.philip@epa.gov. Thank you for your consideration.

Sincerely,



Julie A. DalSoglio
Director
Montana Office

Enclosures

cc: Suzanne Bohan/Judy Roos, EPA 8EPR-N, Denver
Dean Yashan/Robert Ray, MDEQ, Helena

EPA COMMENTS ON THE STONEWALL VEGETATION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Brief Project Overview:

The Lincoln Ranger District, Helena National Forest (HNF), developed the Stonewall Vegetation Project to improve long-term forest health and vegetative diversity, reduce hazardous fuels, improve resilience to insects and wildfire, enhance and restore aspen, western larch, and ponderosa pine species and habitats, utilize economic value of trees, integrate restoration with socioeconomic considerations, and move the Stonewall area towards desired conditions described in the Forest Plan. The project area, consisting of approximately 24,010 acres (23,670 acres National Forest System [NFS] lands), is located approximately 4 miles north and west of the Town of Lincoln, within Lewis and Clark and Powell Counties, Montana, and includes drainages of Lincoln Creek, Beaver Creek and Keep Cool Creek all tributary to the upper Blackfoot River. No action and two action alternatives including the proposed action were evaluated in the DEIS.

Alternative 1 is the no action alternative involving no vegetative treatments and timber harvest, prescribed fire, road construction or other actions, and is evaluated to provide a baseline for comparison to the environmental consequences of the action alternatives.

Alternative 2, the proposed action, involves a total of 8,564 acres (about 36 percent of analysis area) of commercial and noncommercial treatments. Harvest treatments (regeneration harvest, intermediate harvest, and precommercial thinning) are proposed on a total of 3,099 acres (1944 acres tractor logging, 663 acres skyline cable logging, 493 acres hand thinning). Fuels treatments would follow timber removals, including slashing, pile burning, jackpot burning, and underburning. In addition to post-harvest burning, prescribed fire is also proposed within the inventoried roadless areas (IRAs) to promote ecological restoration of a mix of vegetation composition and structure across the landscape. Prescribed fire is proposed on 4,182 acres (about 0.5 percent) within the Bear Marshall Scapegoat Swan Inventoried Roadless Area and on 664 acres (about 3.8 percent) within the Lincoln Gulch Inventoried Roadless Area. Outside of the IRAs, approximately 2.6 miles of road would be built then obliterated immediately following timber removal, and 48.2 miles of road would be used. Project haul routes would be maintained and improved in accordance with BMPs to accommodate haul vehicles. Treatments proposed under alternative 2 would reduce elk hiding and thermal cover in both the Beaver Creek and Keep Cool Creek herd units, whereas the amount and distribution of forage would increase. Neither herd unit would meet Forest Plan standard 3 or 4a. This alternative would require a site-specific, nonsignificant forest plan amendment for standards 3 and 4(a) for the reductions in elk hiding cover and thermal cover. Commercial harvests would provide 22,022 CCF in sawtimber, and generate 171 jobs. Alternative 2 has the highest present net value (PNV) for the timber harvest and required design criteria at positive \$178 thousand, and negative \$1.2 million when considering all proposed activities,

Alternative 3, the preferred alternative, was developed to address scoping issues reducing potential impacts to habitat for threatened, endangered and sensitive species and designated critical habitat; management indicator species (MIS); big game hiding cover, thermal cover, and security cover.

Alternative 3 proposes a total of 6,564 acres (about 27 percent of analysis area) of commercial and noncommercial treatments. Harvest treatments (regeneration harvest, intermediate harvest, and precommercial thinning) are proposed on a total of 2,298 acres (1834 acres tractor logging, 491 acres skyline cable logging, 285 acres hand thinning). Fuels treatments would follow timber removals, including slashing, pile burning, jackpot burning, and underburning. In addition to post-harvest burning, prescribed fire is proposed within the Bear Marshall Scapegoat Swan Inventoried Roadless Area to promote ecological restoration of a mix of vegetation composition and structure across the landscape. Prescribed fire is proposed on 3,565 acres (about 0.4 percent) within the Bear Marshall Scapegoat Swan Inventoried Roadless Area. The Lincoln Gulch Inventoried Roadless Area would not be treated. Outside of the IRAs, approximately 0.4 mile of road would be built then obliterated immediately following timber, and 44.2 miles of road would be used. Commercial harvests would provide 14,299 CCF in sawtimber, and generate 118 jobs. The PNV for the timber harvest and required design criteria is positive \$68 thousand, and negative \$1.1 million for all proposed activities.

Comments:

- Comment K-1. We appreciate the inclusion of clear narrative descriptions of alternatives in the DEIS providing introductory and background information; treatment descriptions; Table 8 summarizing treatments for the alternatives; maps of the action alternatives (Figures 13 and 14); Table 9 showing project design features, best management practices and mitigation; maps showing INFISH buffers (Figures 15 and 16); discussion of monitoring; alternatives considered but eliminated from detailed study; comparison of effects of the alternatives; as well as Appendices discussing public involvement, treatment descriptions/silviculture, cumulative effects, and roadless areas. **The DEIS narrative, tables, maps, and Appendices facilitate improved project understanding, help define issues, and assist in evaluation of alternatives.**
- Comment K-2. **We do suggest that an improved waterbody/watershed map identifying all waterbodies and showing locations of waterbodies in relation to proposed roads and treatment units be included in the DEIS.** In addition to the three main waterbodies in the project area, Lincoln, Beaver, and Keep Cool Creek, the DEIS mentions unnamed tributaries of Lincoln Creek, and Theodore, Yukon, Klondike, Stonewall, Park, Liverpool and Sucker Creeks, yet a map clearly showing the location of all these waterbodies in relation to the proposed actions was not found. Figure 83 (page 546) shows project area watersheds in relation to roads for alternative 2, but waterbodies are not identified on this map, and locations of proposed roads and treatments in relation to waterbodies for both action alternatives are not clearly shown. We recommend that the FEIS provide a clearer map showing the location of all waterbodies in the project area in relation to the proposed actions.

Water Resources/Hydrology/Fisheries

- Comment L-3. **We appreciate the DEIS disclosure that existing water quality concerns in the project area are mainly related to sediment delivered from roadways, and that undersized road culverts are a concern (i.e., culvert failure during flood flows could result in significant sediment delivery to streams, page 523). The DEIS states that many of the existing roads in the project area are known sources of sediment to**

streams and characterized as moderate-to-high-risk in the HNF Roads Analysis Process (page 537). Table 133 (page 538) shows 22 miles of roads with a high risk of sediment delivery and 33 miles of roads with a moderate risk of sediment delivery, and 41 sediment delivery points. We appreciate these disclosures regarding aquatic effects of roads. Roads and motorized uses often affect watershed conditions, water quality and fisheries in streams on National Forests. Sediment from roads, particularly during road construction, and from poorly maintained roads with inadequate road drainage and many stream crossings, is often of concern.

We are pleased that extensive road maintenance to meet State BMPs is planned for project roads to reduce road sediment delivery to surface waters, since older roads were often built with outdated management practices (those dating from the 1950s to the mid-1970s) that need repair and upgrading. Although the DEIS acknowledges that some sediment delivery may occur over the short-term during road construction and road maintenance (page 551, 564). We are also pleased that a relatively small amount of new roads are proposed with the action alternatives (0.4 miles with Alternative 3 and 2.6 miles with Alternative 2), and these roads would be obliterated immediately following timber removal. In addition, we appreciate locating roads in upland areas away from streams (page 532).

- Comment L- 4. The DEIS states that long-term sediment reductions would result from road obliteration (page 551). However, it is not clear if any obliteration or decommissioning of existing roads is proposed. The DEIS seems to indicate that the only proposed road obliteration is the obliteration of the 2.6 miles or 0.4 miles of new temporary road proposed with Alternatives 2 and 3, respectively. Is any other road decommissioning/obliteration proposed?

We fully support decommissioning of roads, since as noted above roads often impact water quality and many roads cannot be properly maintained resulting in road sediment transport to streams. Reductions in road density especially road stream crossing density has often been correlated with improved aquatic health. We also note that lower road densities are often associated with improved wildlife habitat, connectivity and security. In addition, there is often a relationship between higher road density and increased forest use and increased human caused fire occurrences. Reduction in road density, therefore, may also reduce risks of human caused fires, which could be important in an area with high fuels/fire risk and/or wildland/urban interface issues.

We encourage the HNF to consider decommissioning existing roads that are causing resource damages and difficult to maintain. We encourage closure and/or decommissioning of roads near streams with many stream crossings, since removal of these roads are more likely to have water quality benefits than closure and decommissioning of roads on upper slopes and ridges.

- Comment L- 5. The DEIS indicates that segments of the Blackfoot River are water quality impaired and included on Montana's Clean Water Act, Section 303(d) list of impaired waters (page 537), and it acknowledges that the Montana Dept. of Environmental Quality (MDEQ) prepared the Blackfoot River Sediment Total Maximum Daily Load (TMDL) for the river segment below the Forest boundary. It is important that Stonewall Vegetation Project activities be consistent with the Blackfoot Headwaters

Sediment TMDL and Water Quality and Habitat Restoration Plan (which can be downloaded at, <http://deq.mt.gov/wqinfo/TMDL/finalReports.mcp>).

We are pleased that the DEIS states that mitigation measures sufficient to offset any project-related sediment delivery (from treatment units and haul routes) in the form of road BMPs and project design features have been incorporated into the project action alternatives (page 537), and that a goal of no net sediment increase or preferably, a reduction in sediment delivery from current levels for the proposed project has been set (page 538). We also appreciate the conduct of sediment/pollution source surveys and road sediment and culvert surveys for the project analysis (page 531). Table 139 (page 547) shows an estimated reduction of 2 tons of sediment delivery per year with the proposed BMP maintenance and road improvements to be carried out in action alternatives 2 and 3.

The DEIS states that 76.4 miles of NFS roads are located within the Stonewall Project area, equating to a road density of approximately 2.04 miles per square mile (page 163). Forty-eight miles of road used for Alternative 2 and 44 miles of road under Alternative 3 would receive BMP improvements (i.e., surface grading, re-establishment of drainage features -grade dips and ditch-relief culverts-, replacing undersized culverts, and application of sorted gravel at stream crossings and other sediment delivery points). We fully support proposed road BMP improvements including the new culvert to be installed where National Forest System (NFS) Road 626-B1 crosses the tributary to Lincoln Gulch; a sediment-filtering device (i.e., riprap, weed-free straw bales, filter fence, and/or slash filter windrows) at the crossing outlet; and the sediment-filtering device (i.e., weed-free straw bales, filter fence, bio-logs/waddles, and/or slash filter windrows) where NFS Road 607-E1 parallels Stonewall Creek (page 171).

We note, however, that funding for road maintenance is often limited, and there is a significant backlog of road maintenance needs on National Forests (Source: "*Rightsizing*" the Forest Service Road System Part 1: Road Trend Analysis, March 22, 2007). We often have concerns regarding the adequacy of funding to properly maintain road BMPs over the long-term, since roads need to be routinely inspected and road BMPs evaluated in regard to their effectiveness, and BMPs improved and/or maintained as needed over time to remain effective. Will adequate funding for road maintenance and implementation of road BMPs, stream crossings and drainage improvements be provided over the long-term for all roads within the Stonewall Project area?

Specific concerns regarding road BMPs include addressing road drainage and surface erosion, adequacy of waterbars, drain dips, ditch relief culverts to avoid drainage running on or along roads/trails; interception and routing of sediment to streams; unstable stream crossings and potential for washout; culvert sizing, culvert allowance of fish migration and effects on stream structure and seasonal and spawning habitats; supplies of large woody debris; road density; reducing unnecessary stream crossings; eliminating fords, armoring stream channels at stream crossings, graveling roads, reducing motorized uses in more erosive areas; road encroachment on stream, riparian, and wetland habitats; and relocating roads away from streams where possible.

We recommend that the HNF coordinate with Montana DEQ TMDL program staff to assure that the MDEQ considers the proposed Stonewall Vegetation Project to be consistent with the Blackfoot Headwaters Sediment TMDL and Water Quality and Habitat Restoration Plan (e.g., contact MDEQ staff such as Mr. Robert Ray at 406-444-5319 and/or Mr. Dean Yashan at 406-444-5317). We also encourage review of the MDEQ's pamphlet, "*Understanding the Montana TMDL Process*," <http://deq.mt.gov/wqinfo/TMDL/default.mcp> .

Comment L- 6. The DEIS states that three reaches of Keep Cool Creek and one reach of Beaver Creek were assessed to be functioning-at-risk (FAR) (Table 135, page 540), yet little discussion of the causes for these FAR ratings was provided. We recommend that the causes or reasons for the FAR ratings for these "at-risk" stream reaches be discussed further in the FEIS. The DEIS states that the FAR stream segments are expected to remain in that condition under the action alternatives (page 550). If there are anthropogenic causes for these FAR ratings on National Forest lands (e.g., grazing or road management), we encourage the HNF to include actions to help mitigate the adverse effects on stream functions for these at-risk stream segments in the proposed project.

Comment L- 7. The DEIS states that proposed roads would not develop sediment delivery points because they would be located in upland locations without hydrologic connection to any channels (page 533). Although it is later stated that proposed road segment number 5, accessing units 10 and 11, crosses a small drainage of a headwater tributary basin to Lincoln Creek (pages 537, 547), and proposed new road number 1 crosses the drainage of a headwater tributary basin to Lincoln Creek (page 547). This discussion on page 533 about roads in upland locations without hydrologic connections seems inconsistent with the later discussion regarding roads number 1 and 5 crossing drainages. Also as noted in comment #2 the location of existing and proposed roads relative to all project area streams is not clear due to lack of a good waterbody map. We recommend that an improved waterbody/watershed map showing proposed roads in relation to streams be included in the FEIS to assist in project understanding and evaluation. It would also improve disclosure if the proposed new temporary roads to be built were more clearly displayed on Figures 38 and 39 (pages 166, 169) showing roads for Alternatives 2 and 3.

Comment L- 8. Table 9 specifies some road design features and BMPs to mitigate adverse effects from roads. For your information we are providing some general recommendations regarding roads as follows:

- * minimize road construction and reduce road density as much as possible to reduce potential adverse effects to watersheds;
- * locate roads in uplands, away from streams and riparian areas as much as possible;
- * minimize the number of road stream crossings;
- * locate roads away from steep slopes or erosive soils and areas of mass failure;
- * stabilize cut and fill slopes;

- * provide for adequate road drainage and control of surface erosion with measures such as adequate numbers of waterbars, maintaining crowns on roads, adequate numbers of rolling dips and ditch relief culverts to promote drainage off roads avoid drainage or along roads and avoid interception and routing sediment to streams;
- * consider road effects on stream structure and seasonal and spawning habitats;
- * allow for adequate large woody debris recruitment to streams and riparian buffers near streams;
- * properly size culverts to handle flood events, pass bedload and woody debris, and reduce potential for washout;
- * replace undersized culverts and adjust culverts which are not properly aligned or which present fish passage problems and/or serve as barriers to fish migration;
- * use bridges or open bottom culverts that simulate stream grade and substrate and that provide adequate capacity for flood flows, bedload and woody debris where needed to minimize adverse fisheries effects of road stream crossings.

Blading of unpaved roads in a manner that contributes to road erosion and sediment transport to streams and wetlands should be avoided. It is important that road grading focus on reducing road surface erosion and sediment delivery from roads to area streams. Practices of expediently sidecasting graded material over the shoulder and widening shoulders and snow plowing can have adverse effects upon streams, wetlands, and riparian areas that are adjacent to roads. These practices should be avoided.

Roads are particularly vulnerable to damage during spring breakup as overly-saturated roadbeds from winter freezing are working to dry out, and this typically occurs between March 30 and June 30, but can vary depending on the severity of the winter and spring weather conditions. We encourage avoiding road use during spring breakup conditions, and closing roads to log haul during spring break up to reduce rutting of roads that increase road erosion and sediment delivery, and graveling of haul roads. Snow plowing of roads later in winter for log haul should also be avoided to limit runoff created road ruts during late winter thaws that increase road erosion (i.e., ruts channel road runoff along roads increasing erosion and sediment transport).

We encourage routine conduct of inspections and evaluations to identify conditions on roads and other anthropogenic sediment sources that may cause or contribute to sediment to streams, and to include activities in the project to correct as many of these conditions and sources as possible. Forest Service Region I provides training for operators of road graders regarding conduct of road maintenance in a manner that protects streams and wetlands, (i.e., Gravel Roads Back to the Basics). If there are road maintenance needs on unpaved roads adjacent to streams and wetlands we encourage utilization of such training (contact Fred Bower FS RI Transportation Management

Engineer, at 406-329-3354).

We also note that there are training videos available from the Forest Service San Dimas Technology and Development Center for use by the Forest Service and its contractors (e.g., “Forest Roads and the Environment”-an overview of how maintenance can affect watershed condition and fish habitat; “Reading the Traveled Way” -how road conditions create problems and how to identify effective treatments; “Reading Beyond the Traveled Way”-explains considerations of roads vs. natural landscape functions and how to design maintenance to minimize road impacts; “Smoothing and Reshaping the Traveled Way”-step by step process for smoothing and reshaping a road while maintaining crowns and other road slopes; and “Maintaining the Ditch and Surface Cross Drains”-instructions for constructing and maintaining ditches, culverts and surface cross drains).

Comment L- 9. In regard to water yield, Table 142 (page 549) entitled “Percent estimated cumulative water yield increase over baseline conditions (%)” evidences relatively low water yield increases in the Lincoln, Beaver, and Keep Cool Creek drainages as a result of project implementation. We are pleased that the DEIS states that it is unlikely there would be a detectable cumulative increase in water yield, and that the estimated water yield increase for project watersheds would be below the DEQ-recommended threshold of 10 percent, and below the 15 percent stipulated in ARM 17.30.715. The DEIS also reported that project area streams appear to lose flow as they move from steeper areas and encounter deep valley floor sediments, further reducing risk of adverse effects from any increases in water yield (page 549). We agree that it does not appear that estimated increases in water yield would cause adverse effects (i.e., channel or bank erosion from peak flow increases).

Comment L- 10. Thank you for including Table 9 (pages 45-57) identifying project design features, best management practices and mitigation for the Stonewall Vegetation Project, including soil, watershed and fisheries mitigation measures. We appreciate the listing of project design features and mitigation measures to protect water quality and soils (e.g., using cable logging on steeper slopes; reusing existing skid trails where practicable; harvesting on dry, frozen or snow covered soils on sensitive sites; 100 ft distances between skid trails; placing slash on skid trails; seeding landings, scattering coarse down woody throughout harvest units, etc.).

We fully support use of appropriate BMPs to reduce water quality impacts of timber harvests, prescribed burns and road construction activities. We often suggest mitigation measures such as use of existing skid trails wherever possible; restrictions on skidding with tracked machinery in sensitive areas; using slash mats to protect soils; constructing water bars; creating brush sediment traps; adding slash to skid trail surfaces after recontouring and ripping; scarifying compacted soils prior to seeding/planting of forbs, grasses or shrubs to reduce soil erosion and hasten recovery; as well as recontouring, slashing and seeding of temporary roads and log landing areas following use to reduce erosion and adverse impacts to soils.

Wetlands and Riparian Areas

Comment M- 11. EPA considers the protection, improvement, and restoration of wetlands and riparian areas to be a high priority. Wetlands and riparian areas increase landscape and species diversity, and are critical to

the protection of designated water uses. Executive Order 11990 requires that all Federal Agencies protect wetlands. It is important that wetlands and riparian areas be properly managed to maintain and restore the health of watersheds and aquatic resources to sustain aquatic and terrestrial species and provide water of sufficient quality and quantity to support beneficial uses. Adequate riparian vegetation in stream-side areas must be maintained to stabilize streambanks and stream channels during floods and other periodic high flow events.

The DEIS states that no wetlands have been identified within the project boundaries (page 544). It is hard to believe that a project area of over 24,000 acres does not include any wetlands within the project boundaries (i.e., marsh areas, small seeps, springs, etc.). We recommend that all the treatment units be reviewed in the field to determine the presence of wetlands, and if wetlands are found that they be identified on the Sale Area Map and flagged on the ground to better assure that timber contractors will be able to avoid them.

We are pleased that Table 9 (page 52) states that for wetlands greater than one acre, the riparian habitat conservation area (RHCA) would be a minimum of 150 feet and extend to the outer limits of riparian vegetation, the extent of seasonally saturated soil, the extent of highly unstable areas, or the distance equal to the height of one site-potential tree. For wetlands less than 1 acre, the RHCA boundary would be one-half site potential tree from the edges of the stream channel, wetland, landslide, or landslide prone area, or a 50-foot slope distance, whichever is greatest. Such buffers would appear to provide adequate protection for wetlands as long as the wetlands are identified and marked on the ground and on sale area maps. We are also pleased that design feature S/WS/F-22 indicates that heavy equipment use in wetlands will be avoided (page 53), and that INFISH standards including RHCA riparian buffers would be met during the proposed project (page 563).

Soils

Comment N- 12. Table 124 (page 506) shows soil characteristics in the project area, but does not identify the potential for higher erosion risks for the various soil types in the treatment units or where road work would take place. Are any of the soils, particularly soils in summer tractor harvest units or where new roads are proposed, susceptible to high erosion risk or risk of mass failure? We generally recommend avoidance of tractor timber harvest and road construction in areas with sensitive soils and/or high risk of erosion potential.

Comment N- 13. The DEIS states that existing detrimental soil disturbance (DSD) plus the DSD predicted for proposed activities would not exceed 15% of a given activity area, and in areas where more than 15% DSD exists from prior activities, the cumulative detrimental effects should not exceed the conditions prior to the planned activity and should move toward a net improvement in soil quality, thus, setting the threshold value for DSD at 15 % (page 509). Table 125 shows DSD exceeding 15% in some units (e.g., units 1, 12, 14, 15, 59, 65). Appendix B shows that Unit 1 involves 96 acres of regeneration harvest; Unit 12 involves 80 acres of regeneration harvest; Unit 14 involves 11 acres of intermediate harvest; Unit 15 involves 15 acres of intermediate harvest; Unit 59 involves 16 acres of intermediate harvest; and Unit 65 involves 25 acres of intermediate harvest. High DSD in units 12-