

# **Cooney McKay Forest Health and Fuels Reduction Project**

## **Final Environmental Impact Statement**

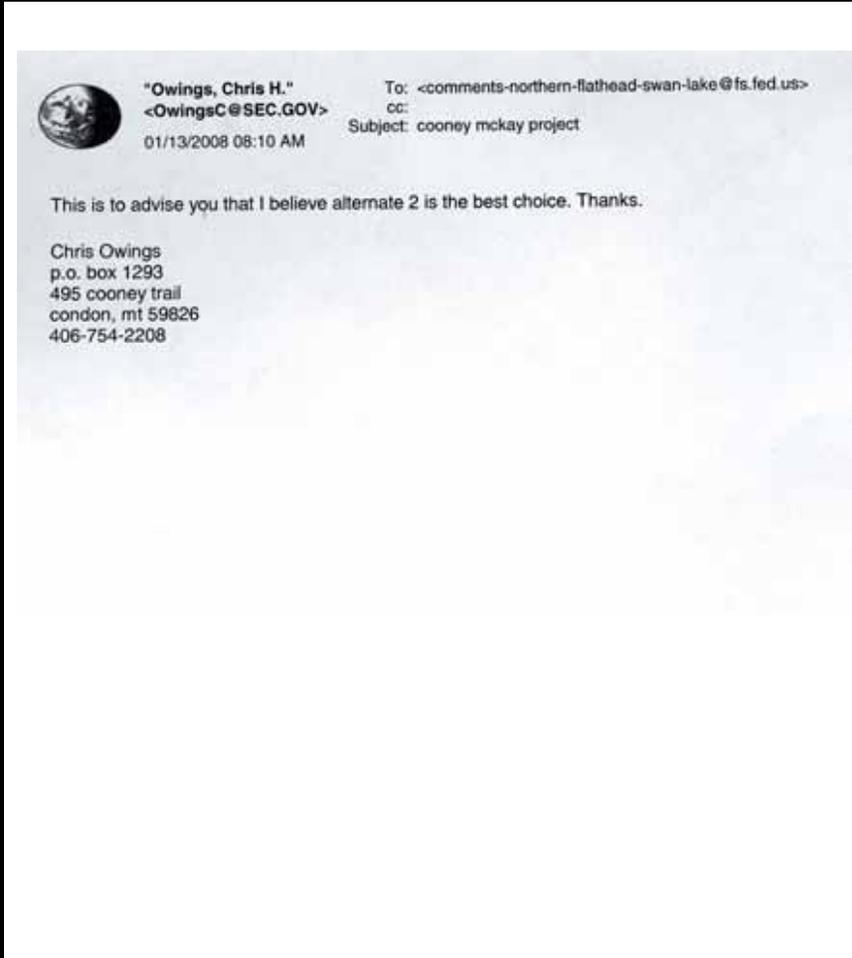
**Swan Lake Ranger District, Flathead National Forest  
Lake and Missoula Counties, Montana**



## **Appendix F – Responses to Letters Received**

# Appendix F

## Response to Comments

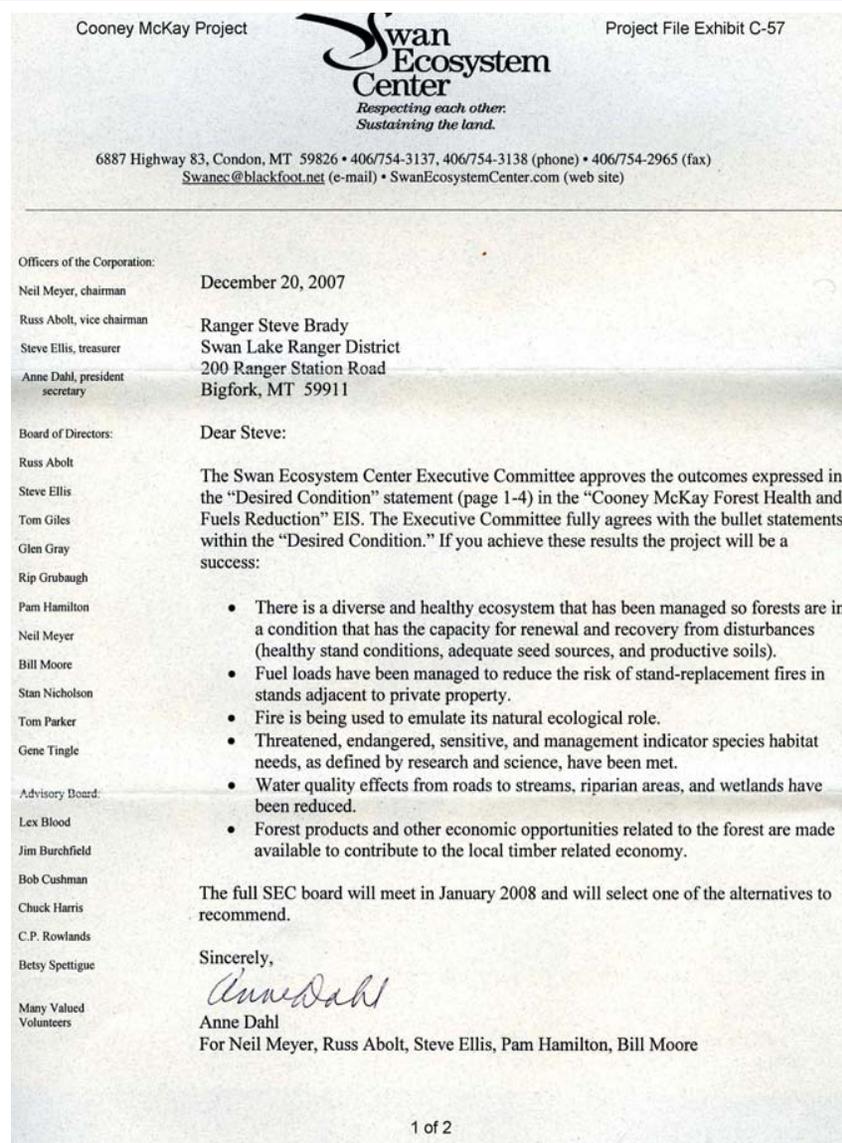
Letter # C-56 – Chris H. Owings	#	Resource Area / Response
 <p>The screenshot shows an email header with a globe icon, the sender's name "Owings, Chris H.", email address "&lt;OwingsC@SEC.GOV&gt;", and the date "01/13/2008 08:10 AM". The recipient information includes "To: &lt;comments-northern-flathead-swan-lake@fs.fed.us&gt;", "cc:", and "Subject: cooney mckay project". The body of the email contains the text: "This is to advise you that I believe alternate 2 is the best choice. Thanks." and a contact address for Chris Owings: "p.o. box 1293, 495 cooney trail, condon, mt 59826, 406-754-2208".</p>	<p>←1</p>	<p><b>Response to Comment #1:</b> Thank you for your support of Alternative 2.</p>



Letter # C-57 – Swan Ecosystem Center

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Resource Area / Response



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- Response to Comment #1:** Thank you for your support of the desired objectives for the Cooney McKay Project.
- Response to Comment #2.** Noted.
- Response to Comment #3.** Noted.
- Response to Comment #4.** Noted.
- Response to Comment #5.** Noted.
- Response to Comment #6.** Noted.
- Response to Comment #7.** Noted.

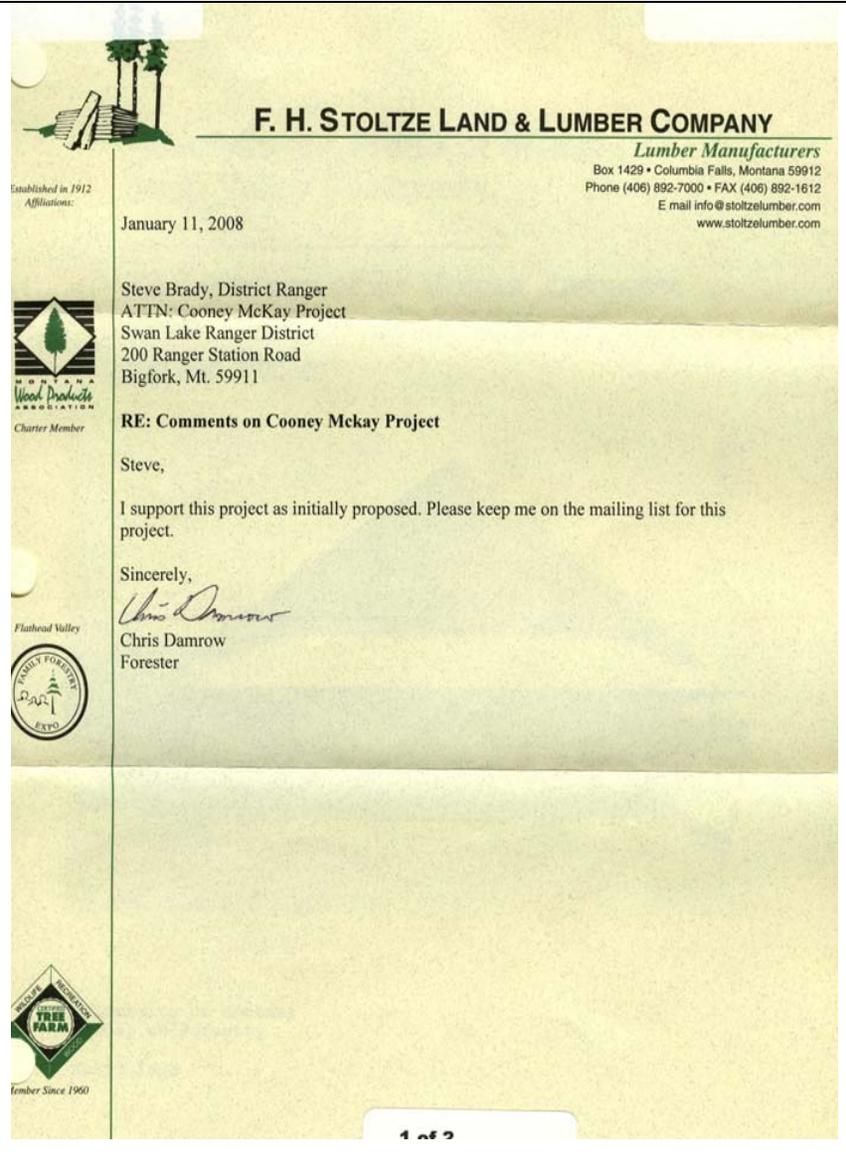
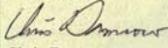


Letter # C-58 – Shari Hirst	#	Resource Area / Response
<p>Cooney McKay Project <span style="float: right;">Project File Exhibit C-58</span></p> <p>30 December 2007</p> <p>Shari Hirst P.O. Box 1018 Condon, MT 59826</p> <p>Steve Brady, District Ranger Swan Lake Ranger District 200 Ranger Station Road Bigfork, MT 59911</p> <p>Dear Mr. Brady:</p> <p>I am a resident and taxpayer of Condon, MT. I am writing in response to the Cooney McKay Forest Health and Fuels Reduction Draft Environmental Impact Statement.</p> <p>I have reviewed the information and have decided on Option 2 as my choice of the best plan for the area.</p> <p>I appreciate being able to have input on the decision making process.</p> <p>Yours truly, <i>Shari Hirst</i> Shari Hirst</p> <p style="text-align: center;">1 of 1</p>	←1	<p><b>Response to Comment #1:</b> Thank you for your support of Alternative 2.</p>



Letter # C-59 – United States Department of the Interior	#	Resource Area / Response
 <p style="text-align: center;"><b>United States Department of the Interior</b> OFFICE OF THE SECRETARY Office of Environmental Policy and Compliance Denver Federal Center, Building 56, Room 1003 Post Office Box 25007 (D-108) Denver, Colorado 80225-0007</p> <p style="text-align: right;">January 16, 2008</p> <p>9043.1 ER 07/1117</p> <p>Ms. Cathy Barbouletos, Forest Supervisor Flathead National Forest 1935 3<sup>rd</sup> Avenue East Kalispell, MT 59901</p> <p>Dear Ms. Barbouletos:</p> <p>The Department of the Interior has reviewed the Draft Environmental Impact Statement (DEIS) for the Cooney McKay Forest Health and Fuels Reduction Project, Flathead National Forest, Lake and Missoula Counties, Montana, and offers the following comments:</p> <p><b>SPECIFIC COMMENTS</b></p> <p><b>Chapter 3: The Affected Environment and Environmental Consequences, Sections on Fisheries, Threatened and Endangered Wildlife Species, and Sensitive Wildlife Species pages 3-131 through 3-223</b></p> <p>The first paragraph on page 3-175 is incorrect. A suggested revision is as follows:</p> <p>"A population point estimate of 241 (202 to 303, 95 percent CI) bears was derived from the 1998 work and 241 (205 to 304, 95 percent CI) from the 2000 data for the 2 million acre greater Glacier National Park area (personal communication with K. C. Kendall, USGS-NOROCK Science Center, unpublished data). The Flathead National Forest was an active participant in the 2004 Northern Divide Grizzly Bear Project, which was designed to derive a population estimate for grizzly bears in the entire NCDE based on DNA sampling techniques. DNA analysis of hair samples collected during 14 weeks in a 2004 USGS study identified a minimum count of 545 individual bears in the 8 million acre NCDE (personal communication with K. C. Kendall, USGS-NOROCK Science Center, unpublished data)."</p> <p>The DEIS contains several statements of fact as well as field observations and surveys conducted without supporting scientific documentation. The final EIS would be enhanced if supporting</p> <p style="text-align: center;">1 of 2</p>	<p style="text-align: center;">←-1</p>	<p><b>Response to Comment #1:</b> The statement you reference on page 3-175 was taken from the document, "Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide For Diversity of Animal Communities" (p.31). The referenced information came from a personal communication with Kate Kendall. As was expected (note the term provisional), there were some changes in the numbers with final analysis of the data. In the most recent communication (memo to Forest Supervisor dated 10/11/2007), Kate indicated that the model-averaged population estimate for grizzly bears in the greater Glacier NP area was 234 bears in 1998 and 247 bears in 2000.</p>

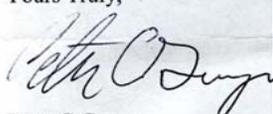
Letter # C-59 – United States Department of the Interior	#	Resource Area / Response
<p>Cooney McKay Project Ms. Cathy Barbouletos, Forest Supervisor 2</p> <p>references for statements of fact and field surveys were identified and included in the Bibliography (Appendix D). Examples of these include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• "Westslope cutthroat trout are native to the analysis area and the Swan River Valley. They have co-existed with bull trout for thousands of years and are well adapted to thrive in cold, clean and relatively unproductive streams found in the Swan River Valley." (page 3-132)</li> <li>• "Canada lynx are known to occur in the Swan Valley, especially in the southern portion of the valley (Seeley/Swan). They are usually found at higher elevations, where their distinctive physiology gives them an advantage over other predators..." (page 3-165)</li> <li>• "There are no known nesting sites [of bald eagles] in the Cooney McKay Project Area. Due to this, there would be no direct or indirect effect to bald eagle nesting habitat due to implementation of the proposed Cooney McKay Project." (page 3-197)</li> <li>• "Black-backed woodpeckers forage in areas with concentrations of dead or decaying trees and logs, often in recently burned forests. The trees in which they feed have frequently only been dead for 2 to 3 years...Fire suppression efforts and salvage of fire-killed or insect-infested trees has reduced the habitat potential for black-backed woodpeckers in the Swan Valley and across northwest Montana." (page 3-198)</li> <li>• "Western big-eared bats may be found in a variety of habitats and have a wide distribution, but they are uncommon or rare. The current range extends throughout western North America with isolated populations further east...There are no known natural sites for big-eared bat maternity or over-wintering roosts (caves, rock outcrops, lava tubes) in the Cooney McKay Area. There are also no known suitable artificial sites for large maternity roosts or hibernacula (e.g. mine tunnels, large bridges)." (page 3-217)</li> <li>• "Surveys for the western big-eared bat are on-going on NFS lands in Montana and Idaho. There have been no reports of western big-eared bats in the Cooney McKay Project Area, and surveys for these bats (2005) did not detect any in the Swan Valley." (page 3-217)</li> </ul> <p><b>Appendix D, Bibliography, page D-13</b></p> <p>The Internet website provided for the U.S. Geological Survey (2004) citation is incorrect. The correct website is: <a href="http://nrm-sc.usgs.gov/news/NCDE_overview.pdf">http://nrm-sc.usgs.gov/news/NCDE_overview.pdf</a>.</p> <p>Thank you for the opportunity to review and comment on this DEIS. If you have any questions concerning our comments, please contact Lloyd Woosley, Chief of the USGS Environmental Affairs Program, at (703) 648-5028 or at <a href="mailto:lwoosley@usgs.gov">lwoosley@usgs.gov</a>.</p> <p>Sincerely,</p>  <p>Robert F. Stewart Regional Environmental Officer</p> <p>2 of 2</p>	<p>2</p> <p>←2</p> <p>←3</p> <p>←4</p> <p>←5</p> <p>←6</p> <p>←7</p> <p>←8</p>	<p><b>Response to Comment #2:</b> Supporting references were added in the Errata to support these statements and are included in the Cooney McKay Project File.</p> <p><b>Response to Comment #3:</b> Supporting documentation is located in the BA (Appendix A and Appendix B), and Project File Exhibit F-2. One other supporting reference has been added to the Errata.</p> <p><b>Response to Comment #4:</b> Supporting documentation is located in the BA (Appendix A and Appendix B), and Project File Exhibit F-2.</p> <p><b>Response to Comment #5:</b> Supporting documentation is located in the BE and Project File Exhibit F-2. One other supporting reference has been added to the Errata.</p> <p><b>Response to Comment #6:</b> Supporting documentation is located in the BE and Project File Exhibit F-2. One other supporting reference has been added to the Errata.</p> <p><b>Response to Comment #7:</b> See Response to Comment #6.</p> <p><b>Response to Comment #8:</b> The website referenced in the DEIS has been updated since the document was printed; fortunately the old website still links the user with an appropriate site. In the future, the newer site will be listed.</p>

Letter # C-60 – F.H. Stoltze Land & Lumber Company	#	Resource Area / Response
 <p><b>F. H. STOLTZE LAND &amp; LUMBER COMPANY</b>  <i>Lumber Manufacturers</i>                      Box 1429 • Columbia Falls, Montana 59912                      Phone (406) 892-7000 • FAX (406) 892-1612                      E mail info@stoltzelumber.com                      www.stoltzelumber.com</p> <p>Established in 1912                      Affiliations:</p> <p>January 11, 2008</p> <p>Steve Brady, District Ranger                      ATTN: Cooney McKay Project                      Swan Lake Ranger District                      200 Ranger Station Road                      Bigfork, Mt. 59911</p> <p><b>RE: Comments on Cooney Mckay Project</b></p> <p>Steve,</p> <p>I support this project as initially proposed. Please keep me on the mailing list for this project.</p> <p>Sincerely,                        Chris Damrow                      Forester</p> <p>1 of 2</p>	<p>←1</p>	<p><b>Response to Comment #1.</b> Thank you for your support of Alternative 2.</p>



Letter # C-64 – Mary Phillips	#	Resource Area / Response
<p><b>To: Steve Brady</b> District Ranger Swan Lake Ranger district 200 Ranger Station Road, Bigfork, MT 59911</p> <p><b>From: Mary Phillips</b> Rumble Creek Rd., Condon, MT 59826</p> <p><b>Subject: <u>Comments on the Cooney McKay Forest Health &amp; Fuels Reduction Draft</u></b></p> <p>I have had the opportunity to review the plan and I appreciate the copy of the report so I can give my comments. It is a well thought out document, and has answered many of the questions I had before I read it. I do however, have a few questions that I would like answered. These are in no particular order.</p> <ol style="list-style-type: none"> <li>1. Several of us (4 families) live on the upper end of Rumble Creek Road and we want to know how long it would be disrupted while the culvert is being replaced?</li> <li>2. Several of us use Rumble Creek water for drinking, so we have concerns that it will disrupt our use. How long do you anticipate before the water is drinkable again? Will there be silting that can affect ponds?</li> <li>3. We do <u>not</u> maintain the road from the end of the county maintained portion on up, so that we don't get lot's of traffic. Will you keep it in the rutted condition that it is presently in?</li> <li>4. What will be your hours of operation on Rumble Creek Road? We have concerns that there will be excess noise, dust, fire concerns from smokers. It is a very narrow road so access to our homes could be blocked?</li> <li>5. If our water lines get clogged with silt, will you provide staff to clean them out?</li> <li>6. I don't see that there will be any logging from the report in the Rumble Creek area, is this correct? If there is, the road is too narrow for logging truck and our own vehicles to pass by each other. Will there be traffic flaggers? What about excess dust? Will there be water trucks to control that dust?</li> <li>7. Will the project affect the Van Lake area? You state on page 3-196 there are no known current or historical eagle nesting sites in the vicinity of the project. I have been told by another resident here that he fishes the lake and has seen two adult Bald Eagles and a fledgling using the lake two out of the past three years. Will your project affect them?</li> <li>8. On page 3-147: Table 3-38 it states: "Culvert @ FR 560 &amp; private water diversion are total barriers." I question that statement since I know fish are found above and below that culvert. Is that the reason you are replacing the culvert? How will replacing the existing culvert help the fish should there be a heavy moisture/runoff event? Won't it also wash out below the culvert</li> </ol>	<p></p> <p>←1</p> <p>←2</p> <p>←3</p> <p>←4</p> <p>←5</p> <p>←6</p> <p>←7</p> <p>←8</p> <p>←9</p>	<p><b>Response to Comment #1.</b> Thank you for your comment.</p> <p><b>Response to Comment #2:</b> Based on a field visit to the site with the Commenter after receipt of these comments, the final decision will defer removal of the culvert at this time. The culvert is properly sized and is fully functional relative to BMP standards, but has a small drop which represents at least a partial barrier to brook trout. Replacement of the culvert had been listed in the DEIS as a possible resource enhancement project. Input from the neighbors revealed that domestic water is taken directly downstream on private land and would likely receive short-term disturbance during culvert removal. Based on field inspection, the culvert still has useful life and did not constitute a BMP issue in its present state. For these reasons, the culvert will not be replaced at this time.</p> <p><b>Response to Comment #3:</b> See Response to Comment #2 above.</p> <p><b>Response to Comment #4:</b> Maintenance of Forest roads within the jurisdiction of the USFS would be conducted to provide adequate access for project traffic, and to meet Best Management Practices to minimize sediment. Road maintenance and BMP work such as cross ditching and blading will occur prior to haul. After haul, the road will likely again need to be bladed. We will not seek to keep the road in a rutted condition.</p> <p><b>Response to Comment #5:</b> The project contract will require that operations provide for access to landowners and the public. We anticipate that the time it will take to complete all work in this area (road maintenance, harvest, and slash treatment of units' tributary to the Rumble Creek road) is estimated to be about 30 to 60 working days. Not all work will likely occur at the same time.</p> <p>Road maintenance and BMP work will occur first and probably take 1 to 2 days. During that time, short delays to residential and public traffic could occur during road grading and cross drain placement. Harvest and log haul will occur after road work was done. During this work, weekend hauling will be prohibited on the Rumble Creek road. No specific operation hours will be required in the contract except as limited during fire season, but the Forest Service will work with immediate neighbors and the contractor to try to minimize these impacts. After log haul and harvest are completed, slash cleanup within the units will occur.</p> <p>Though the contract will likely have a 3 to 4 year total time frame to allow the contractors to do all the work for the entire project area, the time actually</p>

<p><b>again, creating another fish barrier? Will there be staff to repair that culvert so that fish can resume passage?</b></p> <p><b>These are the questions I have for the project. Again, I thank you for the opportunity for us to give you our input.</b></p> <p>Sincerely    <b>Mary Phillips</b></p> <p><i>P.S. I am totally opposed to this project!          Don't Do It.</i></p>	<p>←10</p> <p>spent working in this area is likely to be about 30 to 60 days. Though it may be possible that all the work will occur in a continuous block of time, it is more common that each phase (road maintenance, contract harvest, hand thinning, and slash work) will occur in discrete phases with some time in between in which no operations will be occurring.</p> <p>Relative to smokers, general forest restrictions in smoking imposed as the Forest dries would apply to both the public and the contractor and employees. Additional fire restrictions apply to all contractors with requirements for fire fighting equipment to be on site during fire season and with limitations in timing of equipment use and requirements for post operations watchmen to be on site as forest conditions dry.</p> <p>Relative to dust abatement from use of the road, the contract will require dust abatement on the Forest Service administered portions of the road when dry conditions warrant.</p> <p><b>Response to Comment #6:</b> With the deferral of replacement of the pipe, this concern should not be an issue.</p> <p><b>Response to Comment #7:</b> Logging will occur in Sections 34 and 4, which are accessed by FDR #560. Design Criteria and BMPs will be implemented for dust abatement if necessary.</p> <p><b>Response to Comment #8.</b> Van Lake is approximately 6 miles north of the project area. The analysis disclosed in the DEIS on pages 3-196 and 3-198, identified a finding of "No Impact".</p> <p><b>Response to Comment #9:</b> The reason that the culvert was listed as a possible enhancement project was that the existing culvert has a small drop, which was modeled to be a total barrier to brook trout based on modeling done from data gathered a few years ago. Based on a more recent field look at the culvert and input such as yours, the District Fish Biologist thinks it may be possible that the these barriers may only be limiting immature brook trout. It would take more field work to completely verify that conclusion. However, as the pipe is currently otherwise fully functional, as discussed above, the Forest Service will defer replacement of the culvert at this time and we note that you have observed fish above and below the culvert.</p> <p><b>Response to Comment #10:</b> Your comment is noted.</p>
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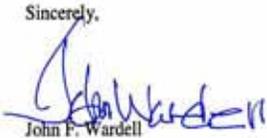
Letter # C-65 – Peter C. Guynn	#	Resource Area / Response
<p style="text-align: right;">Peter C Guynn Caroline C Guynn 929 S Gilpin St Denver Co 80209</p> <p>Steve Brady, District Ranger Cooney McKay Project Swan Lake Ranger District 200 Ranger Station Road Bigfork, Mt 59911</p> <p>Dear Sirs,</p> <p>We own property in the sect. 32 area of the McKay creek area and indeed wish to spend much of our retirement there.</p> <p>I am in general agreement with the goals presented for the Alternative 2. I am a bit hesitant as to the degree of logging that would occur by the “commercial thinning” of the area just east of the Condon landing strip, but I understand that the goal toward “old growth restoration” would best be expedited at least by removing some of the trees in this stand since they are indeed rather thick and evenly spaced but almost all of the same size. I remember 20 years ago how much of the PCL land looked before they were clear-cut; very large P-pines here and there in a park-like setting. Also areas such as these almost never burn out in fires.</p> <p>I am concerned that the invasive weeds need to be controlled not just before and after the logging but with follow-up spraying. The thinning, pre-commercial or commercial will certainly open up more areas for the knapweed infestation.</p> <p>I have heard that much of the funds generated will remain for good use in the Swan, And I certainly am in support of that.</p> <p>Thank you.</p> <p style="text-align: right;">Yours Truly,  Peter C Guynn</p>	<p style="text-align: center;">←1</p> <p style="text-align: center;">←2</p> <p style="text-align: center;">←3</p>	<p><b>Response to Comment #1.</b> Thank you for your comments. The objectives of the treatment are to reduce stand densities so that they are more resilient to fire effects, and to provide sufficient growing space to allow for large tree growth. Commercial thinning units would be designed to leave an average of greater than 50% canopy closure. More detail is provided in the DEIS for each treatment proposed (DEIS, pages 2-6 through 2-8).</p> <p><b>Response to Comment #2:</b> Design Criteria specific to minimizing the spread of noxious weeds is incorporated into the project (DEIS, page 2-34) and will include provisions for follow-up survey and treatment.</p> <p><b>Response to Comment #3.</b> Your support is appreciated.</p>



Letter # C-66 – United States Environmental Protection Agency	#	Resource Area / Response
 <p><b>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY</b>                  REGION 8, MONTANA OFFICE                  FEDERAL BUILDING, 10 West 15<sup>th</sup> St, Suite 3200                  HELENA, MONTANA 59626</p> <p>Ref: 8MO</p> <p>January 24, 2008</p> <p>Steve Brady, District Ranger                  Cooney McKay Project                  Swan Lake Ranger District,                  200 Ranger Station Road                  Bigfork, Montana 59911</p> <p>Re: CEQ # 20070519; EPA Comments on Cooney McKay Forest Health and Fuels Reduction Project DEIS</p> <p>Dear Mr. Brady:</p> <p>The Environmental Protection Agency (EPA) Region VIII Montana Office has reviewed the draft Environmental Impact Statement (DEIS) for the Cooney McKay Forest Health and Fuels Reduction Project in accordance with our responsibilities under the Section 102(2)(C) of National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. 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, and publish a summary of our comments in the Federal Register. EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document (see summary of EPA's DEIS rating system enclosed).</p> <p>The EPA supports conduct of activities to reduce hazardous fuels and fire risk, particularly in wildland urban interface (WUI) areas near homes and structures. The proposed Cooney McKay Forest Health and Fuels Reduction Project appears generally consistent with our preferences favoring thinning from below treatments that retain the larger more vigorous trees and desirable tree species whose overall composition is declining (e.g., western larch, whitebark pine, Ponderosa pine), and restoring prescribed fire to forest ecosystems.</p> <p>We also encourage conduct of timber harvests in a manner that poses low risk to water quality with use of harvest methods minimizing ground disturbance and erosion potential (e.g., skyline cable, helicopter, logging during winter on snow or frozen ground); minimizing new road construction, and inclusion of watershed restoration activities that reduce erosion and reduce sediment production and transport. Watershed restoration activities such as improvements in road drainage, road BMPs, and road decommissioning help offset sediment production associated with timber harvest and road construction activities.</p> <p>1</p>	<p>←1</p>	<p><b>Response to Comment #1:</b> Thank you for your feedback.</p>

Letter # C-66 – United States Environmental Protection Agency	#	Resource Area / Response
<p>We understand that the Cooney McKay project area does not contain water quality impaired streams, however, streams in the project area are tributary to the Swan River and Swan Lake, which are on Montana's Clean Water Act Section 303(d) list of impaired waters. A Total Maximum Daily Load (TMDL) and Water Quality Protection Plan for the Swan Lake/River watershed has been prepared by the Montana DEQ (see at, <a href="http://deq.mt.gov/wqinfo/TMDL/SwanLake/Final01SwanMasterDoc.pdf">http://deq.mt.gov/wqinfo/TMDL/SwanLake/Final01SwanMasterDoc.pdf</a>). It is important that the proposed Cooney McKay project be consistent with the Swan Lake TMDL and Water Quality Plan to promote water quality improvement and restoration of full support of beneficial uses for the impaired waters. The potential for upstream pollutants in unlisted tributaries of 303(d) listed waters to influence water quality and beneficial use support in downstream 303(d) listed waters should be considered. The DEIS states that some streams have high levels of sediment from past land management (e.g., Alder, Smith, Pony, Dog, Meadow, Simpson and Falls Creeks).</p> <p>We are pleased that the Cooney McKay project includes road BMP upgrades and maintenance on 17.9 to 20.9 miles of road, and some less damaging timber harvest methods (i.e., cable or forwarder logging of steeper slopes, hand logging of 50 acres, logging on snow or frozen ground). Although we do have some concerns about the extent of proposed tractor harvests with the action alternatives (637 to 791 acres of tractor harvests are proposed), since tractor harvesting involves more ground disturbance, and thus, greater potential for erosion and sediment production and transport than other logging methods. The extent of proposed logging on snow or frozen ground is not entirely clear. The FEIS should more clearly identify where logging on snow and frozen ground is proposed.</p> <p>We did not see watershed rehabilitation activities proposed other than road maintenance. The DEIS indicates that there are 185.3 total miles of roads in the project area with 124 road stream crossings. The proposed road maintenance included with this project will address only a small portion of the 185.3 miles of road in the project area. If possible, we encourage the Flathead National Forest to consider including additional road system improvements and road decommissioning in the proposed Cooney McKay project to reduce road sediment delivery to surface waters. We especially support road decommissioning, since reductions in road density, especially road stream crossing density, has been correlated with improved aquatic health in many areas.</p> <p>We are also concerned that the majority of proposed road culvert replacements will not be implemented in the next 11 years due to lack of funding. Watershed rehabilitation work that is proposed which cannot be implemented on a timely basis in relation to other project activities has less value in mitigating effects. We recommend that the final EIS include additional information or an approximate schedule of the anticipated time frames for implementation of all proposed activities (i.e., timber harvest, prescribed burning, road construction, road BMP upgrades, culvert replacements, etc.).</p> <p>We are pleased that the DEIS states that Alternative 2, which proposes the most timber harvest and road construction, would have "very limited water quality impacts and would maintain and protect beneficial uses," and that Alternatives 3 and 4, which would have slightly less impacts than Alternative 2, would have limited water quality impacts and maintain and protect beneficial uses. Alternative 4 is stated to have the lowest risk of detrimental soil effects due to reduced seed tree harvests (65 fewer acres seed tree harvest than Alternatives 2 and 3), and Alternative 4 also has the least amount of new road</p> <p style="text-align: center;">2</p>	<p>←2</p> <p>←3</p> <p>←4</p> <p>←5</p> <p>←6</p>	<p><b>Response to Comment #2:</b> The project includes specific Design Criteria to ensure that beneficial uses are protected. In addition, existing sediment sources and fish barriers have been identified to be treated as funding is available to address these concerns (Resource Enhancement Projects, DEIS, page 2-10).</p> <p><b>Response to Comment #3:</b> BMPs specific to tractor harvesting are included in the Design Criteria to minimize impacts to soil. Winter harvesting was not specified for any units; however, it is allowable if the purchaser chooses this option. If the contractor chooses to winter log, the conditions specified in the DEIS on page 2-29 must be met to insure soil protection. The analysis of effects discloses that with the Design Criteria identified, that the proposed project would meet soil quality standards (DEIS, pages 3-13 through 3-35). We do note that the terrain where harvest is proposed is exceptionally gentle compared to most areas on the Flathead National Forest. The amount of ground-based logging proposed reflects this. The gentle terrain and lack of sensitive soils (DEIS, page 3-19), as well as skid trail spacing requirements, requirements for the use of designated skid trails, requirements to re-use existing skid trail templates where they exist, and soil moisture limitation requirement (DEIS, page 2-30) are all designed to protect the soil resource.</p> <p><b>Response to Comment #4:</b> The project will require BMPs to be brought to standard on any roads used to haul wood products. The Forest Service cannot require BMP work to be done on roads not used during project implementation. Haul miles that would receive BMP treatment would occur as described for each alternative in the DEIS on pages 2-12, 2-16, and 2-20. The scope of the project did not include use of all 185.3 miles located within the project area.</p> <p>The resource enhancements described in the DEIS (pages 2-10 and 2-11) describe priority projects that, though not needed to mitigate effects of the proposed action, would enhance fish, watershed, and noxious weed conditions in the project area. We intend to disclose and analyze effects of these projects within the DEIS, FEIS, and ROD and thereby complete NEPA requirements for these activities. Actual implementation of the projects will depend on funding. It is hoped that through use of Stewardship Contracting that the Cooney McKay Project may generate sufficient funding to accomplish some or all of the projects, but if not, the Forest will seek other funding sources such as grants, partnerships or Congressionally appropriated funds to accomplish the projects over time.</p> <p><b>Response to Comment #5:</b> These projects are not identified as mitigation</p>

Letter # C-66 – United States Environmental Protection Agency	#	Resource Area / Response
<p>construction (0.25 miles less road construction), and deletes a road stream crossing in the Alder Creek drainage (Alder Creek is noted to have elevated levels of fine sediment), and deletes some seed tree harvests which would reduce the interior integrity of old growth stands and narrow connections between old growth patches for wildlife that use old growth. Accordingly, the EPA supports selection of Alternative 4 over Alternatives 2 and 3.</p> <p>We always have concerns about new road construction, even temporary roads, since roads are often major anthropogenic sources of sediment that affect hydrology, water quality and fisheries on public lands. While the proposed project appears to minimize new road construction (i.e., 1.0 to 1.25 miles of new temporary road proposed), the DEIS also states that "1 to 2 miles of additional unplanned temporary roads may need to be built, ... since it is commonly discovered during sale layout that additional roads may be needed to facilitate timber haul" (page 3-153). An additional 2 miles of roads could potentially triple the amount of proposed road construction from 1 mile to 3 miles of new temporary road. We believe all new road construction and effects of road construction should be identified, evaluated and disclosed as much as possible during the NEPA process, and not be left to post-NEPA sale layout. We recommend that additional information and analysis be included in the FEIS regarding the total amount of new temporary road likely to be constructed.</p> <p>We appreciate inclusion of the list of site-specific BMPs to protect soils and reduce erosion during timber harvests (Appendix B). These BMPs appear to be appropriate, although we did not see the potential measures of "operating tracked machinery on slash mats" and "adding slash to ripped surfaces to trap sediment," and suggest that these measures also be considered. We are pleased that FISH streamside buffers would be used, and that wetlands are included in RHCAs, so that no timber harvest, temporary road construction, or operation of heavy equipment would be allowed in wetlands &amp; riparian areas, and that treatment units do not overlap with ponds containing sensitive plant species, and with use of 300 foot buffers from occupied ponds and 150 foot buffers from the edge of facultative wet plants at the ponds perimeter. We recommend that streamside and wetland buffer boundaries be identified on the Sale Area Map and flagged in the field so that contractors will be able to avoid them.</p> <p>Finally, we want to note that we do not object to the proposed thinning from below treatments in old growth habitat that are included in Alternative 4 (and Alternative 2), since it appears to us that such treatments may reduce fire risk and provide longer-term protection for old growth trees. Removal of ladder fuels and thinning within old growth stands with the intent of protecting the open grown old growth character of the stands and sustaining existing Ponderosa pine and western larch, which are declining tree species, appears to be an appropriate management activity.</p> <p>The EPA's further discussion and more detailed questions, comments, and concerns regarding the analysis, documentation, or potential environmental impacts of the Cooney McKay Forest Health &amp; Fuels Reduction Project 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). 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.</p> <p style="text-align: center;">3</p>	<p>←7</p> <p>←8</p> <p>←9</p> <p>←10</p> <p>←11</p>	<p>for the remaining activities, and therefore are not required to be implemented to "offset" project effects. The DEIS on page 2-10 states that "BMPs required under Timber Sale Contracts must be completed before timber is hauled." All BMPs identified are necessary to meet BMP standards, and would be implemented. Also see the response to your Comment 4 above.</p> <p><b>Response to Comment #6:</b> Noted.</p> <p><b>Response to Comment #7:</b> Specific Design Criteria are included in the ROD (Appendix 2) to address the concerns raised in your comments. The FEIS and ROD will clarify that a total of 1.25 miles of new temporary road are proposed and was analyzed within the project. This error was noted by other commenters and is corrected in the FEIS. All temporary roads to be constructed are identified and included in the correct range of 1 to 1.25 miles of temporary road. Locations of these temporary roads are shown on the alternative map in the FEIS and ROD.</p> <p><b>Response to Comment #8:</b> Providing for a slash mat is specifically required in the Design Criteria for several units where deemed necessary in Units 4-182 and 4-185 (ROD, Appendix 2, page 2-5).</p> <p>Flagging of buffers are a standard policy during layout on the Flathead National forest.</p> <p><b>Response to Comment #9:</b> Your comment is noted.</p> <p><b>Response to Comment #10:</b> Your EPA rating is noted and additional information is provided in these responses of the FEIS and in the ROD and final Project File.</p> <p><b>Response to Comment #11:</b> Your comment is noted.</p>

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<p>The EPA appreciates the opportunity to review and comment on the DEIS. If we may provide further explanation of our comments please contact Mr. Steve Potts of my staff in Helena at 406-457-5022 or in Missoula at 406-329-3313 or via e-mail at <a href="mailto:potts.stephen@epa.gov">potts.stephen@epa.gov</a>. Thank you for your consideration.</p> <p>Sincerely,</p>  <p>John F. Wardell Director Montana Office</p> <p>Enclosures cc: Larry Svoboda/Julia Johnson, EPA 8EPR-N, Denver Robert Ray/Mark Kelley, MDEQ, Helena</p> <p>4</p>		

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<p align="center"><b>EPA COMMENTS ON THE COONEY MCKAY FOREST HEALTH AND FUELS REDUCTION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT</b></p> <p><b><u>Brief Project Overview:</u></b></p> <p>The Flathead National Forest (FNF), Swan Lake Ranger District developed the Cooney McKay Forest Health and Fuels Reduction Project DEIS to evaluate alternatives and disclose environmental impacts of management activities proposed to improve forest health, reduce fuels, and provide wood products for local communities in the project area. The project area is located in the Swan Valley near Condon, Montana, and stretches from the Swan Mountain Range to the east, Highway 83 to the west, Cooney/Rumble Creek Divide to the south, and Lion/Meadow Creek Divide to the north. National Forest System (NFS) lands occupy 21,800 acres of the project area (57 percent); Plum Creek Timber Company (PCTC) owns about 10,068 acres (27 percent); and other private landowners own about 6,163 acres (16 percent). The area includes the Alder, Pony, Dog, Cat, Condon, and Cooney Creek watersheds of the Swan River basin. Three action alternatives and no action were analyzed.</p> <p>Alternative 1 is the No Action Alternative that provides a baseline for comparison to the other alternatives.</p> <p>Alternative 2 is the original proposed action involving production of 4,100 MBF of timber with commercial harvests on 921 acres (i.e., 561 acres of commercial thinning, 119 acres of old growth maintenance thinning, 79 acres of seed tree harvests, 69 acres of salvage harvests and 93 acres of thinning from below); 155 acres of non-commercial harvests (i.e., 50 acres of thinning from below and 105 acres of pre-commercial thinning); 1833 acres of ecosystem burning; and 127 acres of planting (i.e. 79 acres of hand planting and 48 acres of restoration planting). Harvest treatments emphasize intermediate harvests in stands possessing old growth attributes to harvest primarily lodgepole pine and Douglas-fir to sustain the health and vigor of western larch and ponderosa pine, and reduce ladder fuels and fire risks while preserving old growth character. Alternative 2 includes the following logging systems: 4 acres of cable harvest, 756 acres tractor, 110 acres forwarder, 51 acres forwarder/tractor, 50 acres by hand. Approximately 20.9 miles of haul roads would be improved (i.e., BMPs implemented) and approximately 1.25 miles of temporary road would be constructed. This alternative treats 672 acres in the Wildland Urban Interface (WUI).</p> <p>Alternative 3 was developed to address public comments concerning potential effects on old growth habitat and species that use such habitat. Alternative 3 drops the 119 acres of treatments in old growth forest habitat and involves production of 3,385 MBF of timber with 802 acres of commercial harvests (i.e., 561 acres of commercial thinning, 79 acres of seed tree harvests, 69 acres of salvage harvests and 93 acres of thinning from below); 155 acres of non-commercial harvests (i.e., 50 acres of thinning from below and 105 acres of pre-commercial thinning); 1833 acres of ecosystem burning; and 127 acres of planting (i.e. 79 acres of hand planting and 48 acres</p> <p align="center">1</p>	<p align="center">←12</p>	<p>Response to Comment #12: Your comment is noted.</p>

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<p>harvest, 637 acres tractor, 110 acres forwarder, 51 acres forwarder/tractor, 50 acres by hand. Approximately 20.1 miles of haul roads would be improved (i.e., BMPs implemented) and approximately 1.25 miles of temporary road would be constructed. This alternative treats 589 acres in the WUI.</p> <p>Alternative 4 addresses the potential effects on big game winter range, by dropping seed tree harvest units in MA 9 in the Forest Plan, and involves production of 3,770 MBF of timber with 845 acres of commercial harvest (i.e., 550 acres of commercial thinning, 119 acres of old growth maintenance thinning, 14 acres of seed tree harvests, 69 acres of salvage harvests and 93 acres of thinning from below); 155 acres of non-commercial harvests (i.e., 50 acres of thinning from below and 105 acres of pre-commercial thinning); 1833 acres of ecosystem burning; and 62 acres of planting (i.e. 14 acres of hand planting and 48 acres of restoration planting). Alternative 4 includes the following logging systems: 4 acres of cable harvest, 691 acres tractor, 110 acres forwarder, 51 acres forwarder/tractor, 50 acres by hand. Approximately 17.9 miles of haul roads would be improved (i.e., BMPs implemented) and approximately 1.0 mile of temporary road would be constructed This alternative treats 609 acres in the WUI.</p> <p><b>Comments:</b></p> <ol style="list-style-type: none"> <li>We appreciate the inclusion of clear narrative descriptions and colored maps describing alternatives and features in the project area (Chapter 2 maps and Map Appendix), as well as tables describing and comparing important features of alternatives (Tables 2-1 through 2-14), and Appendices with information on monitoring, BMPs and descriptions of treatments. We particularly appreciate the clear identification of drainages, roads, and treatment units on the alternatives maps that allow easy understanding of locations of treatment units and roads in relation to streams. These maps and tables facilitate improved project understanding, help define issues, and assist in evaluation of alternatives providing a clearer basis of choice among options for the decisionmaker and the public in accordance with the goals of NEPA.</li> </ol> <p><b>Alternatives</b></p> <ol style="list-style-type: none"> <li>The EPA supports conduct of activities to improve forest health and reduce build-up of hazardous fuels and fire risk, particularly in wildland urban interface (WUI) areas near homes and structures. We generally recommend thinning from below treatments that retain the larger more vigorous trees, particularly the desirable tree species whose overall composition is declining (e.g., western larch, western white pine, whitebark pine, Ponderosa pine), and restoration of prescribed fire to forest ecosystems. The proposed Cooney McKay project appears to be generally consistent with these objectives.</li> </ol> <p>We also encourage conduct of timber harvests in a manner that poses less risk to water quality and soils, thus, supporting use of timber harvest methods that minimize ground disturbance and erosion potential (e.g., skyline, helicopter, and logging during winter on</p>	<p>←13</p> <p>←14</p> <p>←15</p>	<p><b>Response to Comment #13:</b> Thank you.</p> <p><b>Response to Comment #14:</b> Thank you.</p> <p><b>Response to Comment #15:</b> BMPs are identified for all roads that would be used during the activities, as well as specific Design Criteria to minimize impacts to beneficial uses (ROD, Appendix 2). In addition, specific Resource Enhancement Projects have been identified to be implemented as funding becomes available (ROD, page 3, and Appendix 1, page 1-7).</p>

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<p>snow or frozen ground); minimize new road construction, and include watershed rehabilitation activities such as road obliteration, road BMP upgrades, road drainage improvements, revegetation, stream and bank stabilization, and other watershed restoration activities along with vegetation management activities to help offset sediment production associated with timber harvest, and road construction activities. We often encourage including improving water quality, fisheries and watershed conditions within the project purpose and need. Although we believe this is more important where water quality impaired streams are located within a project area, and it is our understanding that the Cooney McKay project area does not include water quality impaired streams, although it does include tributaries to the water quality impaired Swan River and Swan Lake.</p> <p>The DEIS indicates that Alternative 4 would have the lowest risk of causing detrimental soil effects due to reduced seed tree harvests (65 fewer acres seed tree harvest than Alternatives 2 and 3), and Alternative 4 also has the least amount of new temporary road construction (0.25 miles less road construction, and deletes a new road stream crossing in the Alder Creek drainage). Accordingly we support selection of Alternative 4 over Alternatives 2 and 3.</p> <p>We do not object to the thinning from below treatments in old growth habitat that are included in Alternative 4, since we recognize that such treatments may reduce fire risk and provide longer-term protection for old growth trees. For that matter, we also would not be opposed to including thinning of lodgepole pine and Douglas fir in areas of proposed seed tree harvest units 26-91 and 26-85 in the Alder Creek drainage that are deleted in Alternative 4, in order to promote western larch and Ponderosa pine species, which are in decline, if such activities could be carried out using low ground disturbance logging methods and avoiding a new road stream crossing, and thus, potential sedimentation increases to Alder Creek.</p> <p>We are pleased that proposals to implement road BMPs on 17.9 to 20.9 miles of road are included in the project, and that some less damaging harvesting methods are also proposed (i.e., cable, forwarder, hand logging), in addition to tractor logging. Although we do have some concerns about the extent of proposed tractor harvests with the action alternatives (637 to 791 acres of tractor harvests are proposed), since tractor harvesting involves more ground disturbance, and thus, greater potential for erosion and sediment production and transport than other logging methods.</p> <p>We also have concerns about new road construction, even temporary roads, since roads are often major anthropogenic sources of sediment that affects hydrology, water quality and fisheries on public lands. While it does look like efforts have been made to minimize new road construction (i.e., 1.0 to 1.25 miles of new temporary road proposed), we want to note that it is important to minimize road construction, site roads away from streams and sensitive areas as much as possible, and properly maintain roads (see our comments # 9, #10, #11 below for further discussion of road issues).</p> <p style="text-align: center;">3</p>	<p>←16</p> <p>←17</p> <p>←18</p>	<p><b>Response to Comment #16:</b> Your support for Alternative 4 is noted. Note in the ROD that Alternative 3 - Modified is the Selected Alternative. This alternative would retain seed tree harvest. The Design Criteria required for maintenance of the soil resource (found in Appendix 2 pages 2-4 to 2-6) would be sufficient to avoid detrimental soil affects (DEIS page 3-34) and included such Design Criteria as skid trail spacing and retention of fine fuels for a wet season (DEIS, page 3-25). Alternative 3 as modified in the final decision actually harvests less ground than Alternative 4.</p> <p><b>Response to Comment #17:</b> The old growth units were included in other alternatives, and were dropped from this alternative in response to specific issues as described in the ROD. The yarding systems as described above will be designed to minimize ground disturbance in the proposed seed tree units. A designed crossing of Alder Creek is required in the Design Criteria (Appendix 2, page 2-7) utilizing an existing crossing site. With these features in place sediment effects due to the crossing will be minimal.</p> <p><b>Response to Comment #18:</b> Tractor and forwarder harvesting are used primarily due to the relatively gentle terrain in the project area. Slopes are generally flat to 30 percent sidelopes with the great majority on the flatter end of the scale. Such ground does not lend itself to cable logging due to lack of deflection. The nature of the soils is not particularly sensitive to disturbance and does not require helicopter harvest to leave the soils in good condition (DEIS, page 3-19).</p> <p>Temporary road construction has been minimized on the project; however, some stands in need of treatment in order to be feasibly harvested do require access. Where such access is needed locations of temporary roads have sought to minimize stream crossings and, where necessary to cross streams, Design Criteria have been established to minimize impacts (See Response to Comment #17).</p> <p>Relative to the amount of summer ground-based harvest, see response to a similar concern above. As discussed in the Soils Section of the DEIS, winter harvest would be allowable, but is not required as the site specific soil conditions are such that summer harvest, as designed, would meet appropriate soil conservation standards (DEIS, pages 3-31 to 3-34).</p> <p>Under the Swan Valley Grizzly Bear Conservation Agreement, if the bear subunit is not "open", timber harvest activities on Plum Creek and DEIS Forest Service lands would generally occur only in the winter season when</p>

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<p>We have particular concerns regarding the DEIS statement that “1 to 2 miles of additional unplanned temporary roads may need to be built, ... since it is commonly discovered during sale layout that additional roads may be needed to facilitate timber haul” (page 3-153). An additional 2 miles of roads could potentially triple the amount of proposed road construction from 1 to 3 miles of new temporary road. We believe all new road construction and effects of road construction should be identified, evaluated and disclosed as much as possible during the NEPA process, and not be left to post-NEPA sale layout. We believe additional information and analysis be included in the FEIS regarding the total amount of new temporary road that is likely to be constructed.</p> <p><b>Soils</b></p> <p>3. We are pleased that the DEIS states that field investigations of soil conditions in the project area were carried out (page 3-15), and that sensitive soils in the project area were screened out by buffering streams and ponds to protect fish and water quality, so that there are no sensitive soils (high erosion or compaction risk) in the area to be harvested (page 3-19). All landtypes in the harvest areas are shown to have “moderate” surface soil erosion ratings (Table 3-5, page 3-19). As noted above, we are also pleased that in addition to tractor harvesting less damaging harvesting methods are also proposed (i.e., cable or forwarder logging of steeper slopes, hand logging of 50 acres), and that the DEIS analysis predicts that Regional soil quality Standards of less than 15% detrimental soil disturbance can be met with proposed logging systems (page 3-22).</p> <p>As stated above, we have some concerns about the extent of proposed summer tractor harvests with the action alternatives (637 to 791 acres of tractor harvests are proposed with Alternatives 3 and 2), since summer tractor harvesting involves more ground disturbance, and has greater potential for erosion and sediment production/transport than other logging methods (i.e., cable, forwarder, winter logging, hand logging, and helicopter harvests). The DEIS states that the Swan Valley Conservation Agreement includes a provision for timber harvest on Plum Creek Timber Company (PCTC) lands that only allows winter logging through the next three years (page 3-126). As you know, logging during winter on snow and frozen ground reduces potential for erosion and sediment production and detrimental soil disturbance. It appears that winter logging may occur in some areas (Table 2-14, page 2-29, and Appendix B BMPs), but it is not fully clear how much or where winter logging vs. summer logging will occur. We support use of winter logging on snow or frozen ground for tractor units wherever there may be higher potential for erosion and sediment production/transport, or damage to soil productivity from summer tractor logging. We recommend clearer disclosure of the extent of winter logging in the FEIS.</p> <p>It is important that BMPs and mitigation measures effectively protect soils and avoid sediment production and transport. We appreciate the inclusion of the list of site-specific BMPs to protect soils and reduce erosion that during timber harvests in Appendix B.</p> <p style="text-align: center;">4</p>		<p>bears are hibernating. When bear subunits are “open” within the overall rotation schedule, summer harvest is generally permissible. This specific bear subunit is open from 2009 to 2011.</p> <p>Though winter logging is not required in any harvest units, the DEIS, as the references cites, describes the type of conditions in the winter that would be necessary for logging to occur. The Design Criteria are getting at the fact, that if winter logging occurs there must be sufficient settled snow and/or frozen ground so that the winter harvest does not actually cause detrimental soil damage. This places a limitation on winter logging, should it occur, to insure that harvest does not occur during the time frames in winter when activities could be detrimental.</p> <p>Providing for a slash mat is specifically required in the Design Criteria for units where this was deemed necessary (DEIS, page 2-30, Appendix 2, page 5).</p> <p>Note that the Selected Alternative has less harvest acres than Alternative 3 (ROD, page 14). As discussed in the soils portion of the DEIS (DEIS, page 3-30) the Design Criteria, particularly skid trail spacing and slash mats, will result in meeting of soil protection standards in all units in all action alternatives. The Soil Scientist weighed the nutrient removal in the seed tree harvest units as, then, the possibly more impactful feature resulting in the rating for Alternative 4. The Design Criteria for retention of fine fuels for one wet season was then designed to compensate within the seed tree units in Alternatives 2 and 3.</p>

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<p>These BMPs appear to be appropriate, although we did not see the potential measures of “operating tracked machinery on slash mats” and “adding slash to ripped surfaces to trap sediment,” and suggest that these measures also be considered.</p> <p>4. The DEIS states that Alternative 4 would have the lowest risk of detrimental soil effects since it includes the least amount of seed tree harvests (14 acres vs. 79 acres of seed tree harvests proposed in Alternatives 2 and 3, page 3-31). We note, however, that Alternative 3 has the least amount of tractor harvests (i.e., 637 acres vs. and 691 acres of tractor harvests with Alternative 4 (and 791 of tractor harvests with Alternative 2). It would appear, therefore, that Alternative 3 with less tractor harvest would have potential for lower risk of detrimental soil disturbance.</p> <p>It is somewhat surprising to us that the DEIS indicates that Alternative 4, with 54 acres of additional tractor harvest in comparison to Alternative 3, is considered to have the lowest risk of detrimental soil effects. Although, we also realize that Alternative 4 includes the lowest amount of proposed new road (1.0 mile vs. 1.25 miles of road proposed with Alternatives 2 and 3). The reduced road construction with Alternative 4 might give it lower risk of detrimental soil disturbance, but the higher amount of tractor harvest in Alternative 4 would tend to give it greater potential for soil disturbance. We suggest that the FEIS include further discussion of the reasoning for stating that Alternative 4 has the lowest risk of detrimental soil effects among the action alternatives (top of page 3-31).</p> <p>5. It is important that adequate woody debris is retained on harvest sites to maintain soil productivity. We did not see clear disclosure regarding the amount of woody debris that would be retained on proposed seed tree units in the discussion of soils, although we are pleased that the wildlife discussion indicates that 15 pieces of coarse woody debris that are 9 to 18 inches in diameter would be maintained in old growth stands (page 3-187). It would be helpful to clarify the woody debris retention requirements for the seedtree harvests outside of old growth stands. We encourage retention of adequate woody debris (and snags) in harvest units to maintain wildlife habitat and soil productivity.</p> <p>Water Quality/Aquatics/Soils</p> <p>6. The DEIS says that one of the assumptions used to model potential sediment generated from land management is that BMPs have been applied on roads used for timber haul (page 3-115). It is stated that this assumption is based on the fact that many of the roads that traverse the area have been built or at least used to haul timber since adoption of BMP guidelines. We have a question about the validity of this assumption, since it is well known that prolonged under-funding of road maintenance on National Forests has resulted in degraded road conditions in many places. It is acknowledged that 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 believe sediment models should accurately account for the actual road conditions that result from inadequate road maintenance and inability to implement and</p> <p style="text-align: center;">5</p>	<p>←19</p> <p>←20</p> <p>←21</p>	<p><b>Response to Comment #19:</b> See the response directly above for the relative ranking of Alternative 4. It should be noted that all alternatives met soil protection standards as designed and that the relative ranking for soils impacts by alternative were one of many factors to weight in the choosing the Selected Alternative described in the ROD.</p> <p><b>Response to Comment #20:</b> Design Criteria specific to coarse woody debris requirements will be incorporated into the project as shown in the ROD, Appendix 2, page 2-12. These will apply to all units including the seed tree units as do the snag retention and recruitment requirements.</p> <p><b>Response to Comment #21:</b> The modeling assumption for BMP’s is conservative in that it is presumed that BMP construction has occurred only on road or segments built or used during a timber sale since 1991. The use of BMP’s on such road segments are funded by the timber sale project and are embedded as required contract provisions within the contract on all haul routes. The individual project road files and surveys contain specific information about the BMP implementation on these projects. Roads used during a project for commercial haul will be brought to BMP standards, if not already BMP compliant. Any new roads are required to be constructed to BMP standard. The funding of such work is through the project itself and is not dependent on road maintenance funding.</p> <p>The Cooney McKay Project only uses a small portion of the roads in the watershed analysis area. Funding for BMP work can only be required within (and financed by) the contract on roads actually used for haul. The watershed cumulative effects analysis area is much broader than the site specific project in order to be able to address the cumulative effect of this project with past, present, and reasonably foreseeable future projects in the watershed area of the project (See “Spatial Bounds, DEIS, page 3-113). For this reason, many more road miles (which include Plum Creek and other ownership roads as well as Forest Service roads) are included.</p>

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<p>maintain BMPs on most roads.</p> <p>Table 3-33 (page 3-116) indicates that there are 185.3 total miles of roads in the project area with 124 road stream crossings. The proposed road BMP implementation and upgrades included with this project will address only a small portion of the 185.3 miles of road in the area (i.e., 17.9 miles of road BMP upgrading proposed with Alternative 4; 20.1 miles of road upgrading with Alternative 3; and 20.9 miles of road upgrading with Alternative 2). The discussion of roads and sedimentation on DEIS pages 3-138 and 3-139 acknowledges sediment effects from roads.</p> <p>Do the predicted sediment yields disclosed in Table 3-33 (<i>Predicted Sediment Yields Comparison and Roads Information</i>, page 3-116) and Table 3-40 (<i>Summary of Cumulative Effects of Sedimentation in Streams</i>, page 3-159) account for the actual level of road maintenance that can be funded and carried out on the 185.3 miles of roads in the project area?</p> <p>7. Thank you for disclosing that while no surface waters in the project area are on the Montana Clean Water Act Section 303(d) list of water quality impaired streams and lakes, surface waters in the project area are tributary to the Swan River, and thus, Swan Lake. As you know the Swan River and Swan Lake are on Montana’s 303(d) list (page 3-119), and a Total Maximum Daily Load (TMDL) and Water Quality Protection Plan for the Swan Lake/River watershed has been prepared by the Montana DEQ (see at, <a href="http://deq.mt.gov/wqinfo/TMDL/SwanLake/Final01SwanMasterDoc.pdf">http://deq.mt.gov/wqinfo/TMDL/SwanLake/Final01SwanMasterDoc.pdf</a>). This TMDL and Water Quality Protection Plan provides recommendations for measures to protect and restore water quality, which including the following:</p> <ul style="list-style-type: none"> <li>• Continued BMP application for timber harvest activities.</li> <li>• Application of road BMPs for forest roads.</li> <li>• Application of BMPs to address existing roads (including haul roads for timber harvest) that are not up to standards, including culvert upgrades.</li> <li>• Protect riparian areas from development. Allow recovery in previously impacted areas.</li> <li>• Stakeholder coordination and monitoring of natural and human impacts on water quality throughout the watershed.</li> <li>• Continued monitoring of fishery trends and in streams where potential impairment conditions may exist.</li> <li>• Focus on protection of key spawning locations for bull trout.</li> <li>• Protect or restore fish passage where desirable.</li> </ul> <p>It is important that the proposed Cooney McKay project be consistent with the Swan Lake TMDL and Water Quality Protection Plan to promote water quality improvement and restoration of full support of beneficial uses for the impaired waters. The potential for upstream pollutants in unlisted tributaries of 303(d) listed waters to influence water</p> <p style="text-align: center;">6</p>	<p style="text-align: center;">←22</p>	<p>The assumptions used for future road maintenance are found in the cumulative effects and watershed analysis portions of the record, but generally assumptions relative to actual BMP construction (as discussed above) and maintenance are conservative. For example, maintenance is not presumed to occur unless tied to other ongoing existing projects or this project itself, or to the limited recurrent maintenance historically provided. BMP’s are not presumed to exist except where specific projects would have implemented them. This project is only described as making incremental improvement relative to BMP’s, which is limited to the roads actually used.</p> <p><b>Response to Comment #22:</b> All of the recommendations listed are included in the Design Criteria, BMPs and specific proposed Resource Enhancement Projects listed in the ROD.</p>

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<p>quality and beneficial use support in downstream 303(d) listed waters should be considered.</p> <p>We are pleased that the DEIS states that Alternative 2, which proposes the most timber harvest and road construction, would have "very limited water quality impacts and would maintain and protect beneficial uses," and therefore, it is assumed that Alternatives 3 and 4, which would have slightly less impacts than Alternative 2, would have even more limited impacts, and thus, also maintain and protect beneficial uses (page 3-122).</p> <p>The DEIS alternatives maps appear to show the greatest amount of commercial harvest in the Alder Creek and Condon Creek drainages. The DEIS states that modeling and field observations suggest that Alder Creek (along with Smith, Pony, Dog, Meadow, Simpson and Falls Creeks) may have high levels of sediment from past land management (page 3-140). We note that seed tree units 26-91 and 26-85 and their associated proposed new access road with new road stream crossing in the Alder Creek drainage would appear to offer potential for aggravating fine sediment levels in Alder Creek. Can the proposed seed tree harvests and road work in the Alder Creek drainage be carried out without aggravating high levels of sediment in Alder Creek? The potential for additional sedimentation in Alder Creek from this seed tree harvest and access road provides one reason we support Alternative 4, since the Alder Creek seed tree units and road and stream crossing are deleted from Alternative 4.</p> <p>We are pleased that the water yield effects of timber harvest and prescribed burning have also been analyzed and no changes in stream stability are predicted and beneficial uses would be maintained with the action alternatives (page 3-123), and that a net reduction in sediment is predicted from BMP implementation on main haul roads (page 3-123). We are also pleased that each harvest unit would include site-specific BMPs to minimize erosion and sediment production, and 300 foot INFISH stream buffers would further protect water quality (page 3-124), and that five culvert replacements are proposed (page 3-152). Although we are concerned that the DEIS states that it is likely that only one or two of these five culvert replacements would actually be implemented within the next 11 years due to lack of funding.</p> <p>It is somewhat dubious to say that five culvert replacements are "proposed" when it appears unlikely that funds would be available to implement the "proposed" activities within the next 11 years. We recommend that the final EIS include additional information or an approximate schedule of the relative anticipated time frames for implementation of all proposed activities (i.e., timber harvest, burning, road construction, road BMP upgrades, culvert replacements, etc.).</p> <p>We also want to note that we very much support replacement of undersized culverts, especially with bridges wherever possible. We support use of bridges wherever possible on road stream crossings to reduce stream channel disturbances. Bridge and culverts should have adequate capacity for flood flows, bedload and woody debris transport.</p> <p style="text-align: center;">7</p>	<p>←23</p> <p>←24</p> <p>←25</p> <p>←26</p>	<p><b>Response to Comment #23:</b> Thank you for your comment; your assumptions are correct. The Selected Alternative is Alternative 3-Modified for slightly less harvest and will have even slightly less impact to water quality, though as you state, the impacts for all action alternatives will maintain and protect beneficial uses.</p> <p><b>Response to Comment #24:</b> Specific Design Criteria and BMPs are identified to minimize the impacts to soil and water quality. Stream buffers will be incorporated as well to further minimize the impacts. See the Response to Comment #17 for more specific information regarding impacts to Alder Creek. The access will be designed to minimize sediment introduction to Alder Creek and harvest on the relatively gentle ground in the area coupled with the required buffers, which will adequately protect the stream.</p> <p><b>Response to Comment #25:</b> Market conditions in the past few month have been very low, but all projects offered to date on the Swan Lake District (none of which have been offered in recent months) have fully supported all included enhancement projects such as the ones you note. There is some likelihood that all projects would be funded and implemented, but since that is not guaranteed, the worst case is disclosed and we do not unduly speculate that past market conditions or better ones will exist.</p> <p>The projects are definitely proposed and their direct, indirect, and cumulative effects are analyzed by this EIS. The ROD authorizes the projects to take place, if sufficient funding is available. The probability of funding implementation is very conservatively estimated and is clearly displayed so as to convey the uncertainty. See also the Response to Comment #17.</p> <p>Timber harvest would likely occur between 2009 and 2011, with road BMP completed before log haul. Temporary road construction would be concurrent with harvest. Burning of the described units would be dependent on having weather and fuel conditions within prescriptions, but could occur as early as 2009 with specific timing requirements as detailed in Appendix 2 of the ROD. We have included the Resource Enhancement Projects in the analysis so that should additional funds become available, the projects can be implemented without additional analysis.</p> <p><b>Response to Comment #26:</b> Your comment is noted.</p>

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<p>While it appears to us that the proposed Cooney McKay project includes planning and design measures that are protective of water quality, we still encourage the Forest Service to contact Montana DEQ TMDL Program staff to assure that the MDEQ considers the proposed project to be consistent with the Swam Lake TMDL and Water Quality Protection Plan (contact Mark Kelley or Robert Ray of the MDEQ in Helena at 444-3508 or 444-5319, respectively). As noted earlier, we encourage consideration of winter logging on snow and/or frozen ground for tractor harvest units wherever there may be potential for higher sediment production and transport, and we support Alternative 4 that deletes seed tree harvests and road construction in the Alder Creek drainage.</p> <p>8. It would be of interest to describe what is being done to address the sediment sources within the project area that are shown on Map 3-4 in the Map Appendix.</p> <p>9. We agree with the discussion in the DEIS stating that forest roads are a significant source of sediment (pages 3-138, 3-139). Sediment from roads, particularly poorly maintained roads with inadequate road drainage, is often a major cause of adverse water quality impacts in forests. EPA fully supports road BMP and drainage improvements and culvert replacements on forest roads, since these are critical to protecting aquatic health. EPA also supports road decommissioning and reductions in road density, since increasing road density, especially road stream crossing density, has been inversely correlated with aquatic health in many areas.</p> <p>Lower road densities are often associated with improved trout habitat, as well as improved wildlife habitat and security. There is also 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 (WUI) issues.</p> <p>If possible, we encourage the Flathead National Forest to consider including some road decommissioning in the proposed Cooney McKay project to reduce road densities in the area, particularly in drainages with high road density and water quality problems related to roads. We note that closures of roads near streams with many stream crossings are more likely to have water quality benefits than closure/decommissioning of roads on upper slopes and ridges.</p> <p>10. While the amount of proposed new temporary road is not large with the Cooney McKay project (i.e., 1 to 1.25 miles of new temporary roads proposed), we always have concerns regarding environmental effects of new roads, even temporary roads, since temporary roads may be in place for several years, during which time some adverse road related water quality effects may occur, and sediment production and transport occurs during road construction and removal. As noted earlier, we are also concerned about the Forest Service's inadequate funding for road maintenance, so once roads are built they often</p>	<p>←27</p> <p>←28</p> <p>←29</p> <p>←30</p>	<p><b>Response to Comment #27:</b> Your suggestion is noted. Please see detailed Responses to Comments #17, #18, and #19.</p> <p><b>Response to Comment #28:</b> Those sediment sources on roads identified for use in this project would have drainage structures improved, culverts stabilized and armored, and other road maintenance activities identified on page 2-10 of the DEIS.</p> <p><b>Response to Comment #29:</b> Your comment is noted. Previous road management decisions in the project area have included seasonal and year round closures and decommissioning, which has reduced total and open road density compared to past conditions. The resulting road densities, without further reductions, were found to adequately balance environmental impacts of the road systems to meet applicable standards, while meeting access needs to adequately provide for a variety of administrative and social needs.</p> <p>The largest impact of the remaining road system to water and fish habitat is related to crossings and proximity of roads to water, which the BMP's discussed in the DEIS, FEIS, and ROD seek to improve, where needed, on the roads used by this project. In addition resource enhancements (as discussed above and in numerous places in the DEIS) are included in the project as potential additional benefits to water quality and fish (DEIS, pages 3-120 and 3-138).</p> <p><b>Response to Comment #30:</b> Specific Design Criteria are included in the ROD to address the concerns raised in your comments (Appendix 2). Resource specific analysis disclosed in Chapter 3 of the DEIS addresses these concerns, and includes these potential additional temporary roads. Further detail is found in Response to Comments #17, #18, #19, and #27. Maintenance of temporary roads is required as a part of the contract for the life of the use temporary roads. During extended periods of non-use during the life of the project, temporary roads are required under the contract to be stored so as to minimize erosion (Appendix 2, pages 2-6 and 2-7, Appendix 4). After use, temporary roads are reclaimed as part of sale requirements and are not left in a fashion to impact water quality.</p>

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<p>tend not to be adequately maintained, which aggravates water quality impacts of roads.</p> <p>As stated earlier, we also have concerns regarding the DEIS statement that “1 to 2 miles of additional unplanned temporary roads may need to be built, ... since it is commonly discovered during sale layout that additional roads may be needed to facilitate timber haul” (page 3-153). If 2 miles of additional road were included in the Cooney McKay project it could potentially triple the amount of proposed road construction. We believe new road construction and effects of road construction should be identified, evaluated and disclosed as much as possible during the NEPA process, and not be left to post-NEPA sale layout. We recommend that additional information and analysis be included in the FEIS as much as possible regarding that anticipated total amount of new temporary road that may be constructed.</p> <p>11. We appreciate the inclusion of guidance and road BMPs in the Appendix B list of BMPs. For your information and consideration, EPA’s general recommendations regarding road construction are:</p> <ul style="list-style-type: none"> <li>* minimize road construction and reduce road density as much as possible to reduce potential adverse effects to watersheds;</li> <li>* locate roads away from streams and riparian areas as much as possible;</li> <li>* locate roads away from steep slopes or erosive soils;</li> <li>* minimize the number of road stream crossings;</li> <li>* stabilize cut and fill slopes;</li> <li>* 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;</li> <li>* consider road effects on stream structure and seasonal and spawning habitats;</li> <li>* allow for adequate large woody debris recruitment to streams and riparian buffers near streams;</li> <li>* properly size culverts to handle flood events, pass bedload and woody debris, and reduce potential for washout;</li> <li>* 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;</li> </ul> <p style="text-align: center;">9</p>	<p>←31a</p>	<p>As responded to earlier, this statement was in error and the maximum total mileage for temporary roads is 1.25 miles.</p> <p><b>Response to Comment #31a:</b> All of these are included in our standard implementation processes and can be found in the ROD and in Appendices 1, 2, 3, and 4 of the ROD.</p>

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<p>that provide adequate capacity for flood flows, bedload and woody debris where needed to minimize adverse fisheries effects of road stream crossings.</p> <p>We also encourage conduct of inspections and evaluations to identify conditions on roads and other anthropogenic sediment sources in the watersheds in the project area that may cause or contribute to sediment delivery and stream impairment, and to include activities in the project to correct as many of these conditions and sources as possible.</p> <p>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 management direction assures that road maintenance (e.g., blading) be focused 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. Road use during spring breakup conditions should also be avoided. 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).</p> <p>Forest Service Region 1 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 Donna Sheehy, FS R1 Transportation Management Engineer, at 406-329-3312).</p> <p>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).</p> <p>Wetlands and Riparian Areas</p> <p>12. EPA considers the protection, improvement, and restoration of wetlands and riparian areas to be a high priority. The DEIS states that there are numerous isolated wetlands in the project area (pages 3-131). Wetlands and riparian areas increase landscape and species diversity, support many species of western wildlife, and are critical to the protection of designated water uses. Wetlands in particular have experienced severe</p>	<p>←31b</p> <p>←31c</p> <p>←32</p>	<p><b>Response to Comment #31b:</b> Surveys were conducted in conjunction with the TMDL assessment (DEIS, page 3-115) and are conducted routinely to develop road BMP requirements within projects.</p> <p><b>Response to Comment #31c:</b> Specific contract requirements are included in all work associated with road reconstruction and maintenance. Road maintenance is inspected during the contract by the Sale Administrator to insure compliance with the specifications.</p> <p><b>Response to Comment #32:</b> The project's Design Criteria incorporate RHCAs and wetland buffers. Specific contract clauses will be included in the contract to ensure these areas are protected as described in Appendix 2 of the ROD.</p>

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<p>cumulative losses nationally. Potential impacts on wetlands include: water quality, habitat for aquatic and terrestrial life, flood storage, ground water recharge and discharge, sources of primary production, and recreation and aesthetics. Executive Order 11990 requires that all Federal Agencies protect wetlands. In addition national wetlands policy has established an interim goal of <b>No Overall Net Loss of the Nation's remaining wetlands</b>, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base (see "Presidential Wetland Policy of 1993" at website, <a href="http://www.usace.army.mil/inet/functions/cw/cecwo/reg/aug93wet.htm">http://www.usace.army.mil/inet/functions/cw/cecwo/reg/aug93wet.htm</a>).</p> <p>The EPA evaluates land management activities proposed within the Interior Columbia Basin for consistency with the provisions of the Interagency Memorandum of Understanding between the Forest Service, BLM, EPA, USFWS, and NMFS for Forest Service implementation of the Interior Columbia Basin Strategy on National Forest lands (referred to as the ICB Strategy, <a href="http://www.icbemp.gov/html/icbstrat.pdf">http://www.icbemp.gov/html/icbstrat.pdf</a> ; and the "A Framework for Incorporating the Aquatic and Riparian Habitat Component of the Interior Columbia Basin Strategy into BLM and Forest Service Plan Revisions," <a href="http://www.icbemp.gov/html/aqripfrm7804.pdf">http://www.icbemp.gov/html/aqripfrm7804.pdf</a> ).</p> <p>Riparian Habitat Conservation Areas (RHCAs) are an important management element in the ICB Strategy to maintain and restore the health of watersheds, riparian, and aquatic resources to sustain aquatic and terrestrial species and provide water of sufficient quality and quantity to support beneficial uses. It is important that proposed harvest be consistent with the riparian management objectives described in the ICB Strategy, which include:</p> <ul style="list-style-type: none"> <li>* Achieve physical integrity of aquatic ecosystems;</li> <li>* Provide an amount and distribution of woody debris sufficient to sustain physical and biological complexity;</li> <li>* Provide adequate summer and winter thermal regulation;</li> <li>* Provide appropriate amounts and distributions of source habitats for riparian- or wetland-dependent species; and</li> <li>* Restore or maintain water quality and hydrologic processes.</li> <li>* Restore or maintain naturally functioning riparian vegetation communities.</li> </ul> <p>We are pleased that wet areas would be identified and avoided or excluded from harvest units (Appendix B), and that wetlands are included in RHCAs, so that wetlands less than one acre would have RHCA buffer of 50 feet, and wetlands greater than one acre would have an RHCA buffer of 100 feet; and that no timber harvest, temporary road construction, or operation of heavy equipment would be allowed in wetlands (Table 2-14). We are also pleased that treatment units do not overlap with ponds containing sensitive plant species, and that 300 foot buffers from occupied ponds and 150 buffers from the edge of facultative wet plants at the ponds perimeter would be used (page 3-74). We recommend that wetland buffer boundaries be identified on the Sale Area Map and</p>	<p>11</p>	

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<p>flagged in the field so that timber contractors will be able to avoid them.</p> <p>Monitoring</p> <p>13. We believe monitoring should be an integral part of land management. The EPA endorses the concept of adaptive management whereby effects of implementation activities are determined through monitoring (i.e., ecological and environmental effects). It is through the iterative process of setting goals and objectives, planning and carrying out projects, monitoring impacts of projects, and feeding back monitoring results to managers so they can make needed adjustments, that adaptive management works. In situations where impacts are uncertain, monitoring programs allow identification of actual impacts, so that adverse impacts may be identified and appropriately mitigated.</p> <p>We appreciate the inclusion of Appendix A on monitoring in the DEIS. Table A-1 in Appendix A states for the Water Resource, “clear drainage features –through notes to the Sale Administrator will be monitored.” It would be helpful if this could be described more clearly (what is meant by “clear drainage features”?).</p> <p>Also is this the only water resource monitoring element? The EPA believes that water quality/aquatics monitoring is an important element in identifying and understanding the consequences of one’s actions, and for determining effectiveness in BMPs in protecting water quality. The achievement of water quality standards for non-point source activities occurs through the implementation of BMPs. Although BMPs are designed to protect water quality, they need to be monitored to verify their effectiveness. If found ineffective, the BMPs need to be revised, and impacts mitigated. We encourage adequate monitoring budgets for conduct of aquatic monitoring to document BMP effectiveness on timber harvests and water quality improvements associated with road BMP work.</p> <p>The Fisheries section in the DEIS indicates that the Flathead National Forest has used pebble counts throughout the Forest to measure fine sediments and conduct effects analysis (page 3-136). Past pebble count data for streams in the Cooney McKay project area are shown (Figures 3-2, 3-3). We are pleased that the Flathead Forest conducts pebble counts to measure fine sediments and to conduct effects analysis. Will any pebble counts and/or other water quality or fisheries effects analysis be conducted in the next 11 years in the Cooney McKay project area? Perhaps there may also be PACFISH/INFISH Biological Opinion (PIBO) monitoring sites in the project area that could be used to help evaluate actual project effects (<a href="http://www.fs.fed.us/biology/fishecology/emp/index.html">http://www.fs.fed.us/biology/fishecology/emp/index.html</a>).</p> <p>If so it would be appropriate to include expected future pebble count monitoring, channel stability sites, PIBO monitoring, etc., in the project area in Appendix A.</p> <p>We believe it is valuable wherever possible to do monitoring to determine actual project effects on water quality and stream channels (aquatic habitat) to verify that aquatic impact predictions were accurate. Although we acknowledge that with use of RHCA</p>	<p>←33a</p> <p>←33b</p> <p>←33c</p>	<p><b>Response to Comment #33a:</b> Monitoring of “clear drainage features” means the routine inspection of culverts, ditches, and dips to insure that they are clear of obstructions to function properly.</p> <p><b>Response to Comment #33b:</b> BMP monitoring is conducted every year on selected activities on a programmatic basis in Region 1. The selection of projects to be monitored is random, but the effectiveness of specific BMP standards (which are standard in the Region) are evaluated to provide feedback for improvement of the BMP’s as you suggest. Monitoring of this type is jointly conducted by Federal and state agencies and private industrial landowners. Past BMP monitoring has indicated a high rate of compliance, effectiveness and implementation (DEIS, Appendix B, pages B-3 and B-4) and has led to evolutionary refinements in the BMP standards themselves.</p> <p>In addition, site specific monitoring on a routine basis during the life of the project is done to insure BMP placement to standard. This inspection work is done by Timber Sale Administrators and Engineering Representatives. Details of what is monitored relative to water quality is found in the DEIS in various references from pages B-7 through B-16 in Appendix B.</p> <p><b>Response to Comment #33c:</b> The types of monitoring you suggest are outside the scope of this project. The project design ensures that the actions do not cause detrimental impacts. The site-specific conditions verified by the Resource Specialists identified measures commensurate with the level of potential impacts and existing conditions. Previous monitoring of similar projects over the years on the forest indicates a high level of effectiveness of these methods. No PIBO monitoring sites are within or adjacent to the project area. There is no compelling need to monitor this specific project, except where the implementation of soils restoration techniques is concerned. That monitoring is compelled by incomplete information related to the site specific effects of the proposed activities in an area of known detrimental disturbance. However longer term studies have been ongoing and are planned related to pre- and post-monitoring of selected streams in the Meadow Smith Project area after completion of that sale.</p>

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<p>buffers and with minimal new construction of only 1 to 1.25 miles of temporary roads and adequate application of BMPs, water quality impacts are likely to be low. Although with potential of an additional 2 miles of road construction the potential for water quality impacts increases.</p> <p>Examples of potential aquatic monitoring parameters that should be considered include channel cross-sections, bank stability, width/depth ratios, riffle stability index, pools, large woody debris, fine sediment, pebble counts, macroinvertebrates, etc.. The EPA especially appreciates inclusion of biological monitoring. Monitoring of the aquatic biological community is desirable since the aquatic community integrates the effects of pollutant stressors over time and, thus, provides a more holistic measure of impacts than grab samples. For your information, the EPA encourages use of the following reference materials in designing an aquatic monitoring program:</p> <p>The Forest Service publication, <u>“Guide to Effective Monitoring of Aquatic and Riparian Resources,”</u> RMRS-GTR-121, available at, <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr121.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr121.html</a> .</p> <p>The Forest Service publication, <u>“Testing common stream sampling methods for broad-scale, long-term monitoring,”</u> RMRS-GTR-122, available at, <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr122.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr122.html</a> .</p> <p><u>“Aquatic and Riparian Effectiveness Monitoring Plan for the Northwest Forest Plan,”</u> Gordon H. Reeves, David B. Hohler, David P. Larsen, David E. Busch, Kim Kratz, Keith Reynolds, Karl F. Stein, Thomas Atzet, Polly Hays, and Michael Tehan, February 2001. Available on-line at, <a href="http://www.reo.gov/monitoring/watershed/aremp-compile.htm">www.reo.gov/monitoring/watershed/aremp-compile.htm</a> .</p> <p><u>Monitoring Guidelines to Evaluate Effects of Forestry Activities in the Pacific Northwest and Alaska;</u> Lee H. McDonald, Alan W. Smart and Robert C. Wissmar; May 1991; EPA/910/9-91-001;</p> <p><u>“Aquatic Habitat Indicators and Their Application to Water Quality Objectives Within the Clean Water Act,”</u> Stephen B. Bauer and Stephen C. Ralph, 1999, EPA-910-R99-014. (This publication is available on-line at, <a href="http://www.pocketwater.com/reports/ahi.pdf">http://www.pocketwater.com/reports/ahi.pdf</a>.)</p> <p><u>Western Pilot Study: Field Operations Manual for Wadeable Streams;</u> Environmental Monitoring and Assessment Program Protocols, Edited by David V. Peck, James M. Lazorchak, and Donald J. Klemm, April 2001, available on-line at, <a href="http://www.epa.gov/emap/html/pubs/docs/groupdocs/surfwatr/field/ewwsm01.pdf">http://www.epa.gov/emap/html/pubs/docs/groupdocs/surfwatr/field/ewwsm01.pdf</a> .</p> <p>Montana DEQ’s Water Quality Monitoring and Assessment information can be found on the website, <a href="http://www.deq.state.mt.us/wqinfo/monitoring/Functions.asp">http://www.deq.state.mt.us/wqinfo/monitoring/Functions.asp</a><a href="http://www.deq.state.mt.us/">http://www.deq.state.mt.us/</a></p>		

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<p><u>Rapid Bioassessment Protocols for use in Streams and Rivers</u>; James A. Plafkin, May 1989, EPA/444/4-89-001.</p> <p><u>"Montana Stream Management Guide; for Landowners, Managers, and Stream Users"</u>, Montana Dept. Of Environmental Quality; December 1995.</p> <p>The Forest Service Region 5 document entitled, <u>"Water Quality Management for Forest System Lands in California: Best Management Practices"</u>, September 2000, is a useful reference for BMP development and BMP effectiveness monitoring. It can be found at the website, <a href="http://fsweb.r5.fs.fed.us/unit/ec/water/water-best-mgmt.pdf">http://fsweb.r5.fs.fed.us/unit/ec/water/water-best-mgmt.pdf</a>.</p> <p><u>"Protocol for Developing Sediment TMDLs"</u>, EPA 841-B-99-004, October 1999 <a href="http://www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf">http://www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf</a></p> <p>Wildlife</p> <p>14. We are pleased that the proposed project would be consistent with the standards and guidelines in the Lynx Conservation Assessment and Strategy (LCAS) and the more recent Northern Rockies Lynx Amendment (page 3-167). The DEIS states that the project "may affect, but is not likely to adversely affect" the threatened Canada lynx (page 3-168), and also "may affect, but is not likely to adversely affects the threatened gray" the threatened wolf (page 3-174) and grizzly bear (page 3-179). If it is determined that the finally selected project alternative could adversely affect any threatened or endangered species (e.g., grizzly bear, lynx, gray wolf) the final EIS should include the Biological Assessment and associated U.S. Fish &amp; Wildlife Service (USFWS) Biological Opinion or formal concurrence for the following reasons:</p> <p>(1) NEPA requires public involvement and full disclosure of all issues upon which a decision is to be made;</p> <p>(2) The CEQ Regulations for Implementing the Procedural Provisions of NEPA strongly encourage the integration of NEPA requirements with other environmental review and consultation requirements so that all such procedures run concurrently rather than consecutively (40 CFR 1500.2(c) and 1502.25); and</p> <p>(3) The Endangered Species Act (ESA) consultation process can result in the identification of reasonable and prudent alternatives to preclude jeopardy, and mandated reasonable and prudent measures to reduce incidental take. These can affect project implementation.</p> <p>Since the Biological Assessment and EIS must evaluate the potential impacts on listed species, they can jointly assist in analyzing the effectiveness of alternatives and mitigation measures. EPA recommends that the final EIS and Record of Decision not be completed prior to the completion of ESA consultation. If the consultation process is treated as a separate process, the Agencies risk USFWS identification of additional significant impacts, new mitigation measures, or changes to the preferred alternative.</p> <p>14</p>	<p>←34</p>	<p><b>Response to Comment #34:</b> Consultation requirements were met prior to the decision and the BO's are included in the record. Ongoing discussions related to the effects on wildlife have occurred throughout the development of the project. The FWS has concurred with the findings and the results of the findings are disclosed in the ROD on page 19.</p>

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<p>these changes have not been evaluated in the final EIS, a supplement to the EIS would be warranted.</p> <p>15. We do not object to the 119 acres of proposed old growth maintenance harvests (thinning) in 5 old growth stands (page 3-186) included in Alternatives 2 and 4. It would appear to us that removal of ladder fuels and thinning within old growth stands with the intent of protecting the open grown old growth character of the stands and sustaining existing Ponderosa pine and western larch, which are declining tree species, would be an appropriate management activity that may provide longer-term protection of old growth habitat in the event of a wildfire, which would reduce adverse wildlife effects associated with fire induced habitat loss. We understand that there may be short-term adverse effects to some wildlife species such as Townsend’s warbler and golden-crowned kinglet from such activities (page 3-186), but other species such as the white-breasted nuthatch and flammulated owl may benefit from such treatments.</p> <p>We are pleased that all snags greater than 18 inches DBH would be retained, and 6 snags per acres of a 12 to 18 DBH would be retained for wildlife species using cavity habitat (page 3-187). We note that the DEIS states that impacts to species that use old growth such as the black-backed woodpecker, flammulated owl, and northern goshawk are stated as “may impact individuals, but will not likely contribute to a trend towards Federal listing or loss of viability to the population of the species” (page 3-201, 3-211, 3-216). We do have some concerns, however, about the temporary road proposed in old growth needed for treatment of unit 18-95, although it appears that this road would only be 55 feet long (page 3-187).</p> <p>16. The DEIS states that five of the proposed six seed tree harvest units would be partially harvested adjacent to old growth forest, and that seed tree harvests that create edge adjacent to old growth reduces the interior integrity of the old growth stand and narrows the connection between old growth patches for wildlife that use old growth (page 3-187). This further supports our belief that Alternative 4 should be preferred over the other action alternatives, since it reduces the seedtree harvest by 65 acres, although Alternative 4 still contains one seed tree unit of 14 acres (unit 8-7) that lies adjacent to old growth (page 3-191). Are the risks of adverse effects to old growth habitat from harvest of this unit worth the benefits associated with harvest of unit 8-7?</p> <p>Air Quality</p> <p>17. The action alternatives include proposals for pile burning, underburning, and ecosystem burning. EPA supports judicious and well planned use of prescribed fire to restore fire to forest ecosystems, manage vegetation and reduce hazardous fuels. Although, as you know smoke from fire contains air pollutants, including tiny particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) which can cause health problems, especially for people suffering from respiratory illnesses such as asthma or emphysema, or heart problems. Particulate concentrations that exceed health standards have been measured downwind from prescribed burns. It is</p>	<p>←35</p> <p>←36</p> <p>←37</p>	<p><b>Response to Comment #35:</b> The construction of the temporary road to Unit 18-95 was included in the analysis and determination of effect for that alternative. However please note that, under the Selected Alternative, which is a modification of Alternative 3, no old growth units will be harvested under this decision and the road into the old growth stand you described will not be constructed.</p> <p><b>Response to Comment #36:</b> In the case of the seed tree harvest proposed, there are several site specific factors to be noted that significantly mitigate the risk of extensive blowdown. Units 8-7 and 8-8 are downwind of the prevailing wind pattern relative to old growth. The exposure created by these units to strong winds is very limited. It has also been observed that the upwind side of the adjacent old growth adjoining these units is an old clearcut on Plum Creek’s Section 7, which is well regenerated. The western edge of these old growth stands has a very wide and long clearing adjacent to them on Plum Creek land and the stands have not significantly unraveled. Strongly rooted ponderosa and larch dominate the dry sites in these stands.</p> <p>Similarly Unit 30-56 creates an 8-acre opening with the largest trees retained within it, next to an old growth stand dominated by very wind firm species, predominately larch, and ponderosa pine, and large Douglas fir. Though the DEIS discloses some potential for wind throw, the limited size of this unit, which is also buffered to the west (the prevailing wind direction) by intact stands, is such that the risk of unraveling of the adjoining old growth stand to the east is very limited. Seed Tree Unit 26-20, which is small (6 acres) in size, adjoins old growth only on the northwest tip of the unit, again upwind of the prevailing wind.</p> <p>Units 26-91 and 26-95 are lodgepole and Douglas-fir stands. They have significant beetle activity. They also contain scattered remnant ponderosa and larch. The large ponderosa and larch will be left, which will have some buffering affect on the old-growth stand to east of these units. The old growth stands to the east are dominated by large, very wind firm, ponderosa and larch. Numerous similar stands adjoining large clearcuts on Plum Creek lands have not been observed to be significantly unraveling. Given the silvicultural needs (significant insect activity) in the seed tree stands compared to the relatively low likelihood of significant impact to the adjoining old growth stands due to wind throw, the decision maker concluded that the amount of risk is minimal and acceptable.</p> <p><b>Response to Comment #37:</b> The DEIS discloses the effects to Air Quality on pages 3-103 thru 3-111. The proposed actions are consistent with all</p>

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<p>important that the proposed project be consistent with the National Ambient Air Quality Standards (NAAQS) for PM<sub>10</sub> and PM<sub>2.5</sub>, (see at, <a href="http://www.epa.gov/air/criteria.html">http://www.epa.gov/air/criteria.html</a> ).</p> <p>In addition, prescribed fire could have impacts on Class II areas and Federally-designated Class I areas, and smoke can reduce visibility and diminish the appreciation of scenic vistas (e.g., Bob Marshall Wilderness Complex and Glacier National Park). The State of Montana has returned the clean air visibility program to EPA (see <a href="http://deq.mt.gov/AirQuality/Visibility.asp">http://deq.mt.gov/AirQuality/Visibility.asp</a> ). This program is intended to address visibility impairments in mandatory Class I areas such as the Bob Marshall Wilderness Complex and Glacier National Park. Please call Ms. Laurel Dygowski of EPA in Denver for latest information on regional haze and visibility issues in Montana at 303-312-6144. See also, <a href="http://www.fs.fed.us/pnw/fera/research/smoke/haze/index.shtml">http://www.fs.fed.us/pnw/fera/research/smoke/haze/index.shtml</a> .</p> <p>We appreciate the air quality discussion in the DEIS (beginning on page 3-103). We are pleased that prescribed burning will be done in accordance with requirements of the Montana Smoke Management Plan (page 3-103). Prescribed burning done in accordance with a certified State Smoke Management Plan such as the Montana Smoke Management Plan is consistent with EPA's <i>Interim Air Quality Policy on Wildland and Prescribed Fire</i>. This is Federal policy which reconciles the competing needs to conduct prescribed fires to manage vegetation and restore fire to fire adapted ecosystems while at the same time maintaining clean air to protect public health. Smoke impacts from prescribed fire carried out during periods of favorable conditions for smoke dispersion are less hazardous than smoke impacts during a wildfire. A copy of the <i>Interim Air Quality Policy</i> can be found at: <a href="http://www.epa.gov/ttn/oarpg/t1/memoranda/firefnl.pdf">http://www.epa.gov/ttn/oarpg/t1/memoranda/firefnl.pdf</a> . EPA air quality guidance can be found at <a href="http://www.epa.gov/air/oaq_caa.html/">http://www.epa.gov/air/oaq_caa.html/</a> . It may be of interest to the public to display the website for the Montana/Idaho State Airshed Group, <a href="http://www.smokemu.org">http://www.smokemu.org</a> .</p> <p>It is important to disclose that even though prescribed burns will be scheduled during periods of favorable meteorological conditions for smoke dispersal, the weather can change causing smoke not to disperse as intended. This can be especially problematic for smoldering pile burns when a period of poor ventilation follows a good ventilation day. Also, if there is potential for smoke to drift into populated areas there should be public notification prior to burns so sensitive people (e.g., people suffering from respiratory illnesses such as asthma or emphysema, or heart problems) can plan accordingly.</p> <p>We encourage use of smoke management techniques during burns to minimize smoke in populated areas as well as visibility effects. Each prescribed burn site will have unique characteristics, but smoke impacts can be minimized by burning during weather conditions with optimal humidity levels and wind conditions for the types of materials being burned. Smoke impacts can also be minimized by limiting the amount of materials and acreage burned at any one time.</p> <p>We suggest that notices are placed in the local newspaper at the beginning of each burn</p>		<p>requirements and regulations. Where possible economically, many of the mechanical fuel treatments will be coupled with utilization or chipping to reduce fuels loadings.</p> <p>Public notice of prescribed burning will be given and is a required part of burn plan approval prior to any ignition. Also, State Air Quality Standards for smoke dispersal must be met on the day of the burn before approval for the burns can given.</p>

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<p>season, and additional efforts are made to contacts residents near burns by telephone to make them aware of burns and potential air quality impacts. This will help sensitive people (e.g., people suffering from respiratory illnesses such as asthma or emphysema, or heart problems) to plan accordingly.</p> <p>We also recommend that efforts be made to educate home owners on the wildland-urban interface who build in fire adapted forest ecosystems regarding the need to use less flammable building materials and to manage fuel and vegetation near their homes (see websites <a href="http://www.firewise.org">www.firewise.org</a> and <a href="http://www.firelab.org">www.firelab.org</a> ). General sound fire management practices include:</p> <ul style="list-style-type: none"> <li>* Reducing the dangerous build-up of dead trees, branches, and vegetative matter on forest floors by using prescribed fire or the selective thinning, pruning, or cutting and removal of trees by mechanical means.</li> <li>* Whenever possible, mechanical thinning can be used as an effective “pretreatment” to prescribed burning, although we also urge consideration of water quality, fishery, and ecological impacts along with air quality impacts when planning management actions (e.g., focusing mechanical treatments near roads to avoid or minimize new road construction). Mechanical treatments may be appropriate where the risk of the escape of prescribed burns is high and where nearby home developments may be threatened.</li> <li>* Using smoke management techniques during burns to minimize smoke in populated areas as well as visibility effects. Each prescribed burn site will have unique characteristics, but smoke impacts can be minimized by burning during weather conditions with optimal humidity levels and wind conditions for the types of materials being burned. Smoke impacts can also be minimized by limiting the amount of materials and acreage burned at any one time. Careful scheduling of the many burning activities to coincide with proper climatological and meteorological conditions helps avoid air quality problems.</li> <li>* Implementing fire hazard awareness and mitigation programs for the public. Closure of back country roads during high fire risk periods may reduce potential for human caused fires.</li> </ul> <p><b>Noxious Weeds</b></p> <p>18. We appreciate the analysis and discussion of noxious weed and invasive plant management for the proposed project (beginning on page 3-53). Weeds are a great threat to biodiversity and can often out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. As you know activities that disturb soils such as timber harvest, grapple piling, road construction, burning, increase potential for weed infestations. We support use of timber harvest methods that minimize soil disturbance, erosion and weed infestations.</p> <p style="text-align: center;">17</p>	<p>←38</p> <p>←39</p>	<p><b>Response to Comment #38:</b> Your comments are noted. There has been an active public awareness campaign in this area for a number of years. Prescribed burning, as well as wildfire has been occurring in the local area for many years. Active measures are being taken on private and public lands specifically related to fuels and fire management.</p> <p><b>Response to Comment #39:</b> Your support is noted. The Forest Weed Management Program includes all of your recommendations. This project has specific Design Criteria related to minimizing the potential for weed spread.</p>

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<p>We are pleased that weed control measures are proposed (Table 2-14, page 2-34). We believe prevention of weed invasions is the cheapest and best way to control weeds. We are pleased that all logging and construction equipment would be washed prior to entering the project area, and that disturbed areas would be reseeded. It is important to seed all sites with disturbed soils such as landings, skid trails, and along roads with weed-free grass seed. We encourage tracking of weed infestations, control actions, and effectiveness of control actions in a Forest-level weed database. Measures that we often recommend for preventing spread of weeds from source areas to uninfested areas include:</p> <p>Ensure that equipment tracks and tires are cleaned prior to transportation to an uninfested site.                      Focus control efforts at trail heads and transportation corridors to prevent tracking of seed into uninfested areas.                      Attempt to control the spread from one watershed to another to reduce water as a transport vector.                      If a localized infestation exists and control is not a viable option, consider rerouting trails or roads around the infestation to reduce available vectors for spread.                      Establish an education program for industrial and recreational users and encourage voluntary assistance in both prevention and control activities.                      Reseed disturbed sites as soon as possible following disturbance.</p> <p>Weed seeds are transported by wind and water, animal fur, feathers and feces, but primarily by people. The greatest vector for spread of weeds is through motorized vehicles-cars, trucks, ATVs, motorcycles, and even snowmobiles. Weed seeds are often caught on the vehicle undercarriage in mud and released on the Forest. A single vehicle driven several feet through a knapweed site can acquire up to 2,000 seeds, 200 of which may still be attached after 10 miles of driving (Montana Knapweeds: Identification, Biology and Management, MSU Extension Service, noted on page 181 of DEIS).</p> <p>An effective noxious weed control program should consider restrictions on motorized uses, particularly off-road uses, where necessary. Off-road vehicles travel off-trail, disturbing soil, creating weed seedbeds, and dispersing seeds widely. Weed seed dispersal from non-motorized travel is of lesser concern because of fewer places to collect/transport seed, and the dispersal rate and distances along trails are less with non-motorized travel. Restrictions on motorized uses may also be needed after burning and harvest activities until native vegetation is reestablished in the disturbed areas to reduce potential for weed infestation of the disturbed sites. It is particularly important to avoid motorized travel in remaining roadless areas, since roadless areas are often reservoirs of native plants, and limitations on motorized travel in such areas can protect such areas from weed invasion and avoid the subsequent need to treat weeds.</p> <p>Prescribed fire has the potential to stimulate weed growth (e.g., Dalmation toadflax or leafy spurge), and can destroy insects planted for biological weed control. We suggest</p>		

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<p>that these considerations be evaluated for burn units. The effect of burning on the potential stimulation of noxious weeds be evaluated during site-specific project level analysis. Also, if sufficient vegetation is killed (e.g., by prescribed burning) it may warrant revegetation efforts. Where no native, rapid cover seed source exists, we recommend using a grass mixture that does not include aggressive grasses such as smooth brome, thereby allowing native species to eventually prevail. Mr. Phil Johnson, Botanist, Montana Dept. of Transportation, in Helena at 444-7657, may be able to provide guidance on revegetation with native grasses.</p> <p>19. Although we support use of herbicides where needed to control weeds, we encourage prioritization of management techniques that focus on non-chemical treatments first, with reliance on chemicals being the last resort, since weed control chemicals can be toxic and have the potential to be transported to surface or ground water following application. Early recognition and control of new infestations is encouraged to stop the spread of the infestation and avoid wider future use of herbicides, which could correspondingly have more adverse impacts on water quality, fisheries, and biodiversity</p> <p>It is important that the water contamination concerns of herbicide usage be fully evaluated and mitigated. All efforts should be made to avoid movement or transport of herbicides into surface waters that could adversely affect fisheries or other water uses. Herbicides, pesticides, and other toxicants and chemicals must be used in a safe manner in accordance with Federal label instructions and restrictions that allow protection and maintenance of water quality standards and ecological integrity, and avoid public health and safety problems.</p> <p>Herbicide applicators should be advised of the potential for runoff of herbicides at toxic concentrations into the streams. The applicators should take precautions during spraying (e.g., applying herbicide only after careful review of weather reports to ensure minimal likelihood of rainfall within 24 hours of spraying; special precautions adjacent to the stream to reduce runoff potential; etc.). It should be unequivocally stated that no herbicide spraying will occur in streams and wetlands or other aquatic areas (seeps, springs, etc.). Herbicide drift into streams and wetlands could adversely affect aquatic life and wetland functions such as food chain support and habitat for wetland species. Streams and wetlands in any area to be sprayed be identified and flagged on the ground to assure that herbicide applicators are aware of the location of wetlands, and thus, can avoid spraying in or near wetlands.</p> <p>Picloram (Tordon) is a particularly persistent, mobile and toxic herbicide. We recommend that road ditches leading to intermittent and perennial streams be flagged as no-spray zones and not sprayed with picloram based herbicides. We also recommend that picloram not be used at rates greater than 0.25 lbs/acre, and suggest that the Forest Service consider applications of persistent herbicides such as picloram only once per year to reduce potential for accumulation in soil. Potential for persistent herbicides to accumulate in soil in harmful amounts are reduced if sites are treated only once per year</p> <p style="text-align: center;">19</p>	<p style="text-align: center;">←40</p>	<p><b>Response to Comment #40:</b> The project incorporates specific Design Criteria (ROD, Appendix 2) to minimize the use of herbicides for weed control. All herbicide applications within this project are authorized under a separate decision and the analysis of effects, specific chemicals to be used, and sideboards for application are discussed in the Flathead National Forests NEPA decision for noxious weed treatment (Noxious and Invasive Weed Control Environmental Assessment).</p> <p>As you suggest, the project also looks to avoid introduction of weeds through contract practices as described in Appendix 2 in the ROD and in the DEIS. Cleaning, revegetation limitation of ground disturbance, are all measures described in the decision that will help limit the spread of noxious weeds. The effects of these activities have been considered as part of the cumulative effects. Sensitive plant surveys are required prior to any chemical treatments and close coordination between the Forest Botanist and weed treatment crews occurs both to prioritize and locate weed populations, and also to authorize treatment with reference to sensitive plants (ROD, Appendix 2, page 2-9).</p>

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<p>(twice being the limit). Trade-offs between effective weed control and effects on soil productivity and leaching concerns may need to be considered. A second treatment application if needed should only occur after 30 days (or according to label directions).</p> <p>For your information, Dow AgroSciences, the manufacturer of Tordon 22K, has recently developed supplemental labeling for Tordon 22K for areas west of the Mississippi River. They have directions for wick or carpet roller applications. Tordon 22K herbicide can be applied using wick or carpet roller equipment where drift presents a hazard to susceptible crops, surface waters, and other sensitive areas. One part Tordon 22K is mixed with 2 parts water to prepare a 33% solution. The wick method of application is more labor intensive but very effective at targeting particular noxious weeds adjacent to surface waters, wetlands, or protected plants.</p> <p>Most picloram products, including Tordon 22K, are Restricted Use Pesticides (RUPs) requiring pesticide applicator certification to purchase and apply. It is important that U.S. Forest Service employees be certified throughout the duration of the project. If commercial applicators will be contracted for RUP applications, we recommend checking to make sure their MT commercial RUP license is current. Please contact Montana Dept. of Agriculture at (406) 444-5400 for more information. Also, please note that registration for Access (which has picloram as an active ingredient) is cancelled.</p> <p>Some suggestions we have to reduce potential water quality and fisheries effects from herbicide spraying are to assure that applicators: 1) are certified and fully trained and equipped with the and appropriate personal protective equipment; 2) apply herbicides according to the label; and 3) use treatment methods that target individual noxious weed plants in riparian and wetland areas (depending on the targeted weed species, manual control or hand pulling may be one of the best options for weed control within riparian/wetland areas or close to water). The herbicide application technique of hand or manual wipe-on (especially applicable for contact systemic herbicides such as glyphosate) may be an option to control individual plants up to the existing water level adjacent to streams or sensitive aquatic sites.</p> <p>We also recommend that weed treatments be coordinated with the Forest botanist to assure protection to sensitive plants, and coordinated with fisheries biologists and wildlife biologists to assure that sensitive fisheries and wildlife habitat areas are protected. You may also want to consider use of a more selective herbicide (clopyralid) for use in conifer associated communities to reduce impacts on non-target vegetation. We also note that spotted knapweed, which is a prevalent noxious weed species in western Montana, is non-rhizomatous and should be relatively easy to control with lower rates of the most selective low toxicity herbicides.</p> <p>For your information, the website for EPA information regarding pesticides and herbicides is <a href="http://www.epa.gov/pesticides/">http://www.epa.gov/pesticides/</a>. The National Pesticide Telecommunication Network (NPTN) website at <a href="http://nptn.orst.edu/tech.htm">http://nptn.orst.edu/tech.htm</a> which</p> <p style="text-align: center;">20</p>		

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<p>operates under a cooperative agreement with EPA and Oregon State University and has a wealth of information on toxicity, mobility, environmental fate on pesticides that may be helpful (phone number 800-858-7378).</p>		

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<p><b>U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements</b></p> <p><b>Definitions and Follow-Up Action*</b></p> <p><b><u>Environmental Impact of the Action</u></b></p> <p><b>LO - - Lack of Objections:</b> The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.</p> <p><b>EC - - Environmental Concerns:</b> The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.</p> <p><b>EO - - Environmental Objections:</b> The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.</p> <p><b>EU - - Environmentally Unsatisfactory:</b> The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).</p> <p><b><u>Adequacy of the Impact Statement</u></b></p> <p><b>Category 1 - - Adequate:</b> EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.</p> <p><b>Category 2 - - Insufficient Information:</b> The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.</p> <p><b>Category 3 - - Inadequate:</b> EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.</p> <p><small>* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.</small></p>		



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<p style="text-align: center;"><b>Wild West Institute</b>  <b>P.O. Box 7998</b>  <b>Missoula, MT 59807</b>  <b>(406) 542-7343</b>  <b>info@wildwestinstitute.org</b></p> <p>January 28th, 2008</p> <p>Cooney McKay Forest Health and Fuels Reduction                      Steve Brady, District Ranger                      Swan Lake Ranger District                      200 Ranger Station Road                      Bigfork, Montana 59911</p> <p>Cathy Barbouletos, Forest Supervisor                      Flathead National Forest                      650 Wolfpack Way                      Kallispell, MT 59901                      February 13, 2007</p> <p><b><i>Transmitted via email--please acknowledge receipt!</i></b></p> <p>Mr. Brady:</p> <p>These are comments on the Cooney McKay Forest Health and Fuels Reduction DEIS, on behalf of the Wild West Institute.</p> <p>We also incorporate by reference the comments of Friends of the Wild Swan and Swan View Coalition, with their associated attachments, into our comments, as we have read them and share similar concerns.</p> <p>Basically the Forest Service (FS) proposes as solutions the same type of activities that led to the problems this new project is supposed to solve. The problem is, there is no place in this manipulate-and-control world view for natural processes to occur, since only with FS sanction will anything be restored. In this world view, nature is a sterile entity that can only self-destruct unless "management" actions are taken. Whereas there is recognition in your proposal that past management has taken a destructive</p>	<p style="text-align: center;">←1</p>	<p><b>Response to Comment #1:</b> The Purpose and need was clearly articulated in the DEIS, pages 1-1 through 1-4. The characterization that the proposed action is the same as the past activities that led to current conditions is not supported by the fact that the proposed activities are not the same. The timber harvest prescriptions, treatment of fuels, application of BMP's and associated Design Criteria are different than past activities and are proposed to meet the Purpose and Need for the area. The applicable Forest Plan</p>

<sup>1</sup> In fact, that map's key is illegible.

<sup>2</sup> Velocity of the wind 20 feet above the vegetation, in this case tree tops.

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<p>path in the past with fire suppression, the proposal lacks any recognition the proposed solutions might also have similar unintended consequences. And without an ounce of humility in approaching something as complex and mysterious as forest ecosystems, failure is all but guaranteed.</p> <p>So let's examine a major premise of the proposal. We've suppressed fire such that fuel buildup is dangerous, so now you want to make the forest safe for more firefighting. Why doesn't the irony of this situation dawn on this agency?</p> <p>What we can wholeheartedly support is "Reduce forest fuels buildup adjacent to public and private lands." Unfortunately, the map included with the scoping letter doesn't show the locations of structures to be protected with this strategy.<sup>1</sup> The current fuel/fire hazard situation on land of <b>all</b> ownerships relevant to this area must be displayed on a map. More importantly, the fuel/fire hazard situation <b>post-project</b> on land of <b>all</b> ownerships relevant to this area must also be displayed on a map. Based on proper mapping of current and projected conditions, please accurately disclose the threats to private structures and people under those scenarios, for all alternatives. It must be discernable why some areas are included for treatment and others are not.</p> <p>We offer the following scientific perspective on how limited those actions must be to avoid the self-perpetuating catch-22 discussed in the previous paragraphs.</p> <p>In proposing to protect private property and human health and safety from wildland fire destruction, we ask that you consider the concepts of Community Protection Zone (CPZ) and Home Ignition Zone (HIZ) (Nowicki, 2002). The CPZ is an overlapping area where vegetation manipulation can provide opportunities for firefighters to protect other flammable features of a community (Id.). Treatment beyond approximately 400 meters (1312 feet) from the house is not necessary for safety for most communities (Id.).</p>	<p>←2</p> <p>←3a</p>	<p>direction for the Cooney McKay Project area is described on page 3-10 of the DEIS. The characterization of management in which natural processes are the sole management influence is not a management emphasis for these lands. The proposed action is consistent with Forest Plan direction for these areas. Also important for you to recognize is the fact that the Flathead National Forest includes approximately 1 million acres of land (or nearly 50 percent of Forest total) in which the goal is to manage the area by "protecting the natural dynamic equilibrium associated with natural, complete ecosystems."</p> <p>Fire suppression is consistent with Forest Plan direction and will continue to be a management tool the Flathead National Forest implements.</p> <p><b>Response to Comment #2:</b> The Purpose and need does not state that structure protection is the goal or objective of this project. However, structure protection has been a major reason for the greatly increasing costs of fire fighting. The intent of this project is to reduce the potential for wildfire to become large where these types of costs become necessary. The recently completed Seeley Swan Fire Plan identifies hazardous fuels conditions for the planning area and is available in the project file. Within this plan the density of residences is mapped and this density is used as one criteria for priority of treatment zones with the plan. GPS locations of residences were used to create the density maps. This work is referenced in the Seeley Swan Fire Plan (page 23). We used this information as one of the criteria to cite treatments for this project. However the Purpose and Need for the project is broader than solely fuels treatments around homes (or potential future homes). The development of alternatives also included the forest health considerations clearly stated in the Purpose and Need for the project. A complex variety of reasons affected actual unit selection with considerations such as old-growth, riparian areas, stand conditions, and a host of factors interplayed in the actual location of units selected. The DEIS discusses these factors at length.</p> <p><b>Response to Comment #3a:</b> The suggestion to limit the project to treatments within a few tens of meters to less than 400 meters from homes was not considered for the following reasons:</p> <ul style="list-style-type: none"> <li>• Treating only near individual home sites on a limited basis does not fully meet the intent of breaking up fuel continuity generally within the project area to allow firefighters to more safely, tactically, and</li> </ul>

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<p>The FS (Cohen, 1999) reviewed current scientific evidence and policy directives on the issue of fire in the wildland/urban interface and recommend the focus be on structure ignitability in the HIZ rather than extensive wildland fuel management:</p> <p>The congruence of research findings from different analytical methods suggests that home ignitability is the principal cause of home losses during wildland fires... Home ignitability also dictates that effective mitigating actions focus on the home and its immediate surroundings rather than on extensive wildland fuel management.</p> <p>[Research shows] that effective fuel modification for reducing potential WUI fire losses need only occur within a few tens of meters from a home, not hundreds of meters or more from a home. This research indicates that home losses can be effectively reduced by focusing mitigation efforts on the structure and its immediate surroundings. Those characteristics of a structure's materials and design and the surrounding flammables that determine the potential for a home to ignite during wildland fires (or any fires outside the home) will, hereafter, be referred to as home ignitability.</p> <p>The evidence suggests that wildland fuel reduction for reducing home losses may be inefficient and ineffective. Inefficient because wildland fuel reduction for several hundred meters or more around homes is greater than necessary for reducing ignitions from flames. Ineffective because it does not sufficiently reduce firebrand ignitions (Cohen, 1999)</p>		<p>strategically address a fire in the interface area. This would limit the ability of fire fighting efforts to more effectively and safely fight a fire in the area as a whole.</p> <ul style="list-style-type: none"> <li>• Such an approach would leave significant areas of fuel buildup and dense canopies with ladder fuels within the WUI area. As described above, leaving such stand conditions untreated would limit options that firefighters would have for safely stopping a moving fire within the interface area, and would leave many areas where crown fire potential could have been reduced within the urban interface. Bypassing the opportunity to treat such areas would not be consistent with the purpose of the project.</li> <li>• Research has determined that treatments intended to reduce fuels around communities at risk, rather than individual structures, need to go beyond the home ignition zone (Graham, 2004). While individual home-by-home treatments can help reduce the risk of loss of individual homes, relying solely on such treatments would forego strategic opportunities for controlling fires within this WUI area.</li> <li>• Limiting treatments to a smaller area immediately adjacent to homes or structures would only allow for a small subset of the interface area to be treated in the project area. In addition, it would not meet the broader purpose of the proposal in treating fuels in the WUI area.</li> <li>• The proposed fuel reduction treatments are consistent with management actions recommended in the Seeley-Swan Fire Plan (2004) for defensible space around individual homes, reduction of fuels at the neighborhood or subdivision level, and the thinning and biomass removal in the landscape adjacent to WUI to help limit wildfire intensity and rate of spread (Project File Exhibit Q-9).</li> <li>• Treatment solely within close proximity to homes also would not meet the Purpose and Need to improve and/or maintain the general forest, resiliency and sustainability of stands within the project area. This approach would focus solely on fuel reduction in the immediate vicinity of homes. The Purpose and Need of this project is not limited solely to fuel reduction. This alternative would not address broader forest health and stand conditions, which are an intrinsic part of the Purpose and Need of this project.</li> </ul>





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<p>What we are requesting is that the EIS fully evaluate one alternative that focus entirely on actions within a carefully crafted CPZ boundary, to deal with the <b>Major Issue</b> of avoiding the management-perpetuated cycle of fire suppression -&gt; fuel reduction -&gt; fire suppression -&gt; fuel reduction -&gt; fire suppression -&gt; fuel reduction -&gt; fire suppression -&gt;...</p> <p>Carrying out the manipulate-and-control paradigm that suppresses and replaces natural, rejuvenating fire with prescribed fire and logging guarantees that more of the same management will have to be performed periodically—forever. So the FS must have some long-term program for maintaining the allegedly safer conditions, including how areas will be treated in the future following proposed treatments, or how areas not needing treatment now will be treated as the need arises. So please disclose that plan in the EIS. The public at large, and private landowners, must understand the implications of this long-term program, including the amount of funding necessary, and the likelihood based on realistic funding scenarios for such a program to be funded both adequately and in a timely manner. We believe that it is far from realistic for the FS to imply that it can manage as such into perpetuity—even for financial reasons alone.</p> <p>The recent report from USDA OIG, 2006 calls into question the agency's indiscriminate fire suppression policies. These problems have also come to the attention of newspaper editors (e.g., Idaho Post Register, 2000).</p>	<p>←4</p> <p>←5a</p>	<p>The existing conditions in place in many stands to be treated present some very real problems that are not readily solved by the principles cited. For example, as has been discussed elsewhere, fuel loadings and canopy closure conditions in many stands are such that without mechanical reductions in fuel loading or stand density, it would be very difficult to responsibly underburn to solely achieve healthier stands. The cost of hand treatment and its practical feasibility on the stands proposed under this decision, would be extremely high and without a foreseeable funding source. These activities would, of course, require thousands of dollars per acre. To date, we have seen little indication that Congress is willing to fund such an effort. In addition, the treatments proposed by this article are not consistent with the Forest Plan goals for much of the Cooney McKay Project Area and is not consistent with the Purpose and Need for this project.</p> <p><b>Response to Comment #4:</b> This alternative was considered, and the reasons for not considering it in detail are disclosed in the DEIS, pages 2-5 and 2-6. The proposed treatments would provide the opportunity to allow fire a more natural role in the ecosystem.</p> <p><b>Response to Comment #5a:</b> The intent is to move the landscape toward more sustainable conditions that allow natural processes to occur. Future treatments in these areas would be determined based upon specific needs at the appropriate time. Without treatment, the risk of losing these ecosystem components continues to increase. Allowing natural processes to return to the landscape is unrealistic, given the amount of human occupancy and property values within the area.</p>





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<p>uncertainties and biases when used to estimate the population mean fire interval (FI) or other parameters of the fire regime. First, the population mean FI is difficult to estimate precisely because of unrecorded fires and can only be shown to lie in a broad range. Second, the interval between tree origin and first fire scar estimates a real fire-free interval that warrants inclusion in mean-FI calculations. Finally, inadequate sampling and targeting of multiple-scarred trees and high scar densities bias mean FIs toward shorter intervals. In ponderosa pine (<i>Pinus ponderosa</i> Dougl. ex P. &amp; C. Laws.) forests of the western United States, these uncertainties and biases suggest that reported mean FIs of 2–25 years significantly underestimate population mean FIs, which instead may be between 22 and 308 years. We suggest that uncertainty be explicitly stated in fire-history results by bracketing the range of possible population mean FIs. Research and improved methods may narrow the range, but there is no statistical or other method that can eliminate all uncertainty. Longer mean FIs in ponderosa pine forests suggest that (i) surface fire is still important, but less so in maintaining forest structure, and (ii) some dense patches of trees may have occurred in the pre-Euro-American landscape. Creation of low-density forest structure across all parts of ponderosa pine landscapes, particularly in valuable parks and reserves, is not supported by these results.</p> <p>In response to these scientific concerns, we ask that the EIS document disclose what fire history methodology it uses, acknowledge the limitations of the fire history methodology, and disclose what project-area data it's relying upon.</p> <p>Baker et al., 2006 note a “widespread assumption that ecological restoration and fire hazard mitigation can be simultaneously achieved in most low-elevation, dry forest ecosystems of the western United States (e.g. Covington, 2000), which is a major driving force behind US national fire policy (United States Department of Agriculture, 2002; White House, 2002).” Noting the assumption is built upon models of the Southwestern U.S., their research attempts to answer the question if the models would “apply to related forests of the Rocky Mountains.” They “draw upon some previously unused historical sources and other evidence to assess the applicability of the low-severity model, and an alternative variable-severity model, throughout the ponderosa pine–Douglas fir forests of the US Rocky Mountains.”</p>	<p>←6b</p>	<p><b>Response to Comment #6b:</b> The DEIS discloses the fire history methodology used on pages 3-83 through 3-87.</p>

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<p>In examining evidence for their “variable-severity fire model” the authors note that “natural fires vary in severity and frequency, sometimes burning at low severity in surface fuels and sometimes burning as high-severity fires in the crowns of trees, or with a mixture of surface and crown fire. In the variable-severity model, most of the landscape historically experienced or is capable of supporting high-severity fire and most stands (i.e. 1–100 ha areas of forest) have evidence of mixed- or high-severity fire over the last few centuries.”</p> <p>Discussing available scientific sources on this topic, the authors point out:</p> <p style="padding-left: 40px;">In Montana, tree-ring studies show that some ponderosa pine–Douglas fir forests had infrequent high-severity fires as well as more frequent low-severity fires (Barrett, 1988; Arno et al., 1995b, 1997). The area of these forests from eastern Montana to northeastern Wyoming, including the Black Hills, appears to have had variable fire severity, based on historical and tree-ring evidence (Shinneman &amp; Baker, 1997; Arno &amp; Allison-Bunnell, 2002). Forest-reserve reports also indicate that mixed- and high-severity fire (Fig. 4) occurred in pure ponderosa pine forests from Idaho to Colorado and in mixed ponderosa pine–Douglas fir forests.</p> <p style="padding-left: 40px;">It has long been known that logging of large overstorey trees in ponderosa pine forests can lead to a pulse of tree regeneration, often concentrated within one to a few decades after logging, and this pulse, if it occurs, can later become a dense, young understorey in the forest (Curtis &amp; Wilson, 1958; Smith &amp; Arno, 1999)..... Many ponderosa pine–Douglas fir forests had been high-grade logged by about ad 1900 (e.g. Graves, 1899; Romme et al., 2000), leading to potential tree-density increases during recovery, a process that continues today.</p> <p>On the confounding effects of livestock grazing, the authors state:</p> <p style="padding-left: 40px;">Livestock grazing may have complex effects, but generally</p>	<p>←6c</p>	<p><b>Response to Comment #6c:</b> This variability of fire severity is recognized and disclosed in the DEIS on page 3-84.</p>

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<p>increases tree density in formerly open stands and thereby increases the fine fuels that contribute most to fire intensity and severity. Removal of grass reduces competition, allowing more trees to successfully regenerate, shown experimentally in the Southwest (Pearson, 1942), and also by paired comparisons in other parts of the West, in which mesas subject to livestock grazing have much higher tree density than do comparable nearby ungrazed mesas (Rummell, 1951; Madany &amp; West, 1983). Grazing can also initially reduce the quantity of fine grass fuels needed for surface fires, and the onset of heavy grazing in south-western ponderosa pine landscapes is temporally associated with a marked reduction in surface fires (e.g. Savage &amp; Swetnam, 1990). However, fine fuels are likely not to have remained low for long. Higher tree density increases fine fuels that lead to faster fire spread and increases ladder fuels that lead fire into the canopy (Zimmerman &amp; Neuenschwander, 1984), together increasing the potential for more fires and more severe fires. However, this potential effect is most important in mature and old-growth forests, which are rare today, and in younger forests evidence of tree density increase is difficult to detect or is minor, as explained later.</p> <p>Addressing the commonly expressed notion that logging can restore these forests to more natural “historic conditions”, the authors state:</p> <p>Because multiple explanations exist for the presence and abundance of young, shade-tolerant trees, these trees need to be dated and linked definitively to a particular land use (e.g. livestock grazing, logging, fire exclusion) before their removal is ecologically appropriate in restoration, and so that the correct land use, as discussed later, can be modified.</p> <p>...Identification of which land uses affected a stand proposed for restoration is essential. Fire exclusion, logging and livestock grazing do not have the same effects on these forests, their effects vary with environment, and they require different restoration actions. Before restoration begins, it makes sense to modify or minimize the particular land uses that led to the need for restoration, to avoid repeating degradation and ongoing, periodic subsidies that merely maintain land uses at non-sustainable levels (Hobbs &amp; Norton, 1996). For example, thinning an overgrazed forest, without restoring native bunchgrasses lost to grazing, may</p>	<p>←6d</p> <p>←6e</p>	<p><b>Response to Comment #6d:</b> There can be, and typically are many reasons that existing stand conditions occur, and these reasons are identified in the DEIS in general for the project area. It is not necessary to identify each specific reason for each stand, since the general condition is one that has been identified as a result of both logging and fire exclusion. Grazing has not been a major factor in the existing condition.</p> <p><b>Response to Comment #6e:</b> See Response to Comment #6d.</p>



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<p>severity and low-severity models include about 80 observations from 16 forest reserve reports, supplementary historical analyses, 10 fire scar/age structure studies, and 20 direct measurements or reconstructions of tree density near ad 1900. Based on these data together, the variable-severity model, which emphasizes an important role for severe fires in the historical fire regime, appears to apply to a larger portion of the ponderosa pine–Douglas fir zone in the Rocky Mountains than does the low-severity model. In most Rocky Mountain ponderosa pine–Douglas fir forests, the variable-severity model, in which forest structures were shaped mainly by infrequent severe fires, is consistent with the evidence of fire history and tree age structures in these forests. Only limited areas of ponderosa pine–Douglas fir forests in the Rocky Mountains, primarily at low elevations and on xeric sites, appear to have been shaped primarily by low-severity fires. To assess which model may best fit a potential management area, site-specific information on fire history and forest conditions is required.</p> <p>Please disclose, as the authors state, <u>the site-specific information</u> on fire history and forest conditions for the project area.</p> <p>The authors recommend:</p> <p>For the purpose of ecological restoration in Rocky Mountain ponderosa pine–Douglas fir landscapes, the most appropriate action at the present time is a mixture of modest passive and active approaches. Undisturbed mature forests require little or no restoration – a passive approach is best. Active approaches may include a little thinning of young stands to enhance structures typical of later stages of development, combined with protection of old trees, reversal of adverse effects of logging and livestock grazing, and changes in land uses so they do not continue to cause degradation. Reintroduction of both low-severity surface fires and high-severity fires may be feasible under some circumstances of land use. However, reintroduction of fire should not be based on converting dense mature stands into sparse open woodlands based on the false premise that surface fires previously maintained tree populations at low densities. Thinning these forests is likely to lead to renewed tree regeneration, hence a need for renewed thinning, in a potentially endless, costly and futile cycle that does not restore the forest. Large, dead wood in most of these</p>	<p>←6h</p> <p>←6i</p>	<p><b>Response to Comment #6h:</b> As stated previously, there are several desired conditions associated with the Cooney McKay Project. Fire history and forest conditions are disclosed in the DEIS.</p> <p><b>Response to Comment #6i:</b> To meet the desired conditions identified for this project, the proposed action was developed to address the Forest Plan, key issues, and ecological conditions of the project area.</p>

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<p>forests does not need reduction; certainly, raking, piling and burning large, dead wood is misdirected as these fuels may be ancient and are more likely to be in deficit than in surplus. A modest suite of reversal–reform approaches will provide benefits for both people and the ecosystem, and can begin today, even without needed research at the landscape scale. Ponderosa pine–Douglas fir forests in the Rocky Mountains, where the variable-severity model applies, are not in seriously degraded condition, compared to forests in which the low-severity model applies, and do not require much costly thinning and other active restoration actions. The variable-severity model, which applies to most of these forests, suggests that Rocky Mountain ponderosa pine–Douglas fir landscapes historically were dense, have long been naturally fire-prone, are dangerous places to live, and will remain so after restoration.</p> <p>The DEIS states that historical fire regimes were assigned by potential vegetation groups (PVGs). However, Hessburg et al (2007) found have found that PVGs do not correlate well with fire severity and is therefore not a useful parameter for the purposes of interpreting fire regime characteristics. They state:</p> <p>In addition to top–down biogeoclimatic controls, there is likely bottom-up topo-edaphic control of premanagement era and present-day fire severity, but the potential vegetation type poorly explained this relation in mixed conifer forests in eastern Washington. There has been a strong tendency to use the potential vegetation type as a surrogate for the vector of unknown environmental variables that controls fire severity. This was probably done for at least two reasons: (1) it is intuitive that the potential vegetation type might integrate and reflect the biophysical factors responsible for bottom-up spatial controls; and (2) foresters and fire scientists interested in landscape restoration need a method to spatially distribute historical and present-day fire disturbance and its effects in order to simulate spatio-temporal patterns and variation in forest structure and composition (e.g., see Chew 1997; Hann et al. 1997; Keane et al. 1998, 1999, 2002). These reasons aside, we suspect that any vector of purely environmental variables will fall short as a useful surrogate for fire severity because such patterns are inherently noisy and influenced</p>	<p>←7</p>	<p><b>Response to Comment #7:</b> Potential vegetation groups were used to determine natural fire regimes, as well as an analysis of fire history. This is not used as a fundamental basis for the proposed action, but rather a descriptor for the conditions that exist that differ from the desired condition.</p>

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<p>by processes with strong stochastic elements. Schoennagel et al. (2004) used Kuchler's PNV groups to summarize relations in the Rocky Mountains (Kuchler 1964, 1975). While related to the potential vegetation type, they are sufficiently different in concept to function well in generalizing correspondence between fire regime and vegetation type. Recall that Kuchler's types define what will occur in an environmental setting considering the natural disturbance regimes, soils, climate, and topography.</p> <p>This brings into question a fundamental assumption of the DEIS that must be accounted for. Since this assumption underlies the basic forest health purpose and need of the DEIS, the FEIS should show 1) that the assumption of close correlation between PVGs and fire regimes is different than that found by Hessburg et al (2007) and that therefore no changes in the FEIS are warranted or 2) if the FNF cannot verify their assumption of correlation between PVG and fire regimes then the FEIS must explicitly account for this and make the necessary changes in the FEIS.</p> <p>Another major premise behind this proposal is that insect infestations and tree diseases are somehow bad for the ecosystem: "Reduce the risk of insect epidemics and disease infestations within the project area." Focusing on removing trees because they're dead, or "treating" the forest so that trees will only die by permission of a chainsaw will reduce biological diversity, and the FS has little if any information on the long-term consequences. One wildlife species especially sensitive to the FS's management paradigm is the black-backed woodpecker. Cherry (1997) states:</p> <p>The black-backed woodpecker appears to fill a niche that describes everything that foresters and fire fighters have attempted to eradicate. For about the last 50 years, disease and fire have been considered enemies of the 'healthy' forest and have been combated relatively successfully. We have recently (within the last 0 to 15 years) realized that disease and fire have their place on the landscape, but the landscape is badly out of balance with the fire suppression and insect and disease reduction activities (i.e. salvage logging) of the last 50 years. Therefore, the black-backed woodpecker is likely not to be abundant as it once was, and continued fire suppression and insect eradication is likely to cause further decline.</p>	<p>←8</p>	<p><b>Response to Comment #8:</b> Please read the black-backed woodpecker analysis on pages 3-198 through 3-201 in the DEIS. In the woodpecker analysis in the section under Existing Condition, it states "Habitat for the black-backed woodpecker is abundant and well distributed across the Northern Region and by Forest (Samson 2005, USDA 2007)."</p> <p>"A Conservation Assessment of the Northern Goshawk, Black-backed Woodpecker, Flammulated Owl, and Pileated Woodpecker in the Northern Region , USDA Forest Service" Samson (2005, amended March 6, 2006) demonstrates that the Northern Region and the Flathead National Forest provide for the diversity of plant and animal communities for those species listed above.</p> <p>In addition Project File Exhibit F-2, "Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities," addresses the natural history, population, habitat and distribution of wildlife species found on the Flathead National Forest. This document discusses the threats to the black-backed woodpecker, conservation measures in place to address those threats, and an evaluation of the species at the Forest and Regional level. The effects of fire suppression on the black-backed woodpecker are discussed in the Cumulative Effects Worksheet, Project File Exhibit F-10.</p>

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<p>Past actions were, unfortunately consistent with this policy, and the proposed project would continue that mindset. Please disclose the impacts of your forest wide fire/insect/disease suppression program on woodpeckers and other species that rely on agents causing tree mortality.</p>		<p>The DEIS also describes how Forest Plan standards for the retention of snags and down woody debris would be met in the project area (DEIS, page 3-227 through 3-229).</p>
<p>The DEIS says that 39% of the area has been regeneration harvested, (DEIS, 3-39). If all that logging has taken the project area away from historical fire conditions, what makes the FS think that more logging is the answer and won't contribute to further departures from historical conditions? Is the FNF's position that only fire suppression has resulted in departures from historical conditions and that logging has not directly and indirectly, by contributing to fire exclusion effects, also contributed to these departures? The FNF makes no distinction between logging, fire suppression, and fire exclusion and their unique direct and indirect effects that have contributed to current conditions. How then, if the FNF has not identified the causes of alteration from past conditions and the unique impacts of each cause, can it hope to successfully restore the forest and how will the currently proposed actions have any great measure of success if they were not based on such an evaluation?</p>	<p>←9</p>	<p><b>Response to Comment #9:</b> The DEIS recognizes that the past regeneration harvesting is contributing towards the conditions that provide for natural fuel breaks that would slow the spread or reduce the intensity of a wildfire (DEIS, page 3-98). Logging has contributed to a departure from historic conditions in the numbers of large trees, scattered through the landscape. The proposed treatments would retain the existing large diameter trees, maintaining this ecosystem component through reduced competition and reducing the potential for loss through wildfire.</p> <p><b>Response to Comment #10a:</b> The final decision for this project is to select Alternative 3 - Modified, as described in the ROD. Under this alternative there would be no treatments in old growth. The rationale for deferring the old growth treatments is provided in more detail in the ROD.</p>
<p>On page S-3 of the DEIS, the FS claims that “[t]hese treatments are proposed to reduce the likelihood of the loss of these stands due to a wildfire. (referring to oldgrowth)” In essence, the FS is claiming that their old growth maintenance treatments will benefit old growth and old growth associated species. Yet, as far as we know, this is an untested hypothesis. The FNF is not even waiting to implement and monitor its approved old growth treatments in the Meadow Smith project. Why does the FS think the “untested hypothesis” is scientifically and legally sufficient? Has the validity of the FNF’s claims been tested yet, anywhere in the Swan Valley or elsewhere that the FNF can document?</p>	<p>←10a</p>	<p><b>Response to Comment #10b:</b> Please refer to the old growth criteria and standards described in the DEIS, pages 3-171 through 3-194. The DEIS describes the stand structure for the entire project area on page 3-43. In no case do proposed treatments sever existing old growth stands from forested cover and isolate those old growth habitats. There is a limited amount of regeneration harvest (max. 79 acres) proposed, however these units do not isolate old growth stands. The other types of harvest proposed would not inhibit connectivity due to the type of harvest being proposed, and in fact, would tend to move these stands more rapidly toward old growth conditions, a positive move towards old growth connectivity.</p>
<p>Please disclose whether the amount of existing old growth meets standards and other required levels for old-growth habitat. The FS must consider the likelihood that the burned areas had old-growth habitat characteristics <u>enhanced</u>, <u>not destroyed</u> by the fire. Please disclose if the proposed cutting units were, still are, or will, in the foreseeable future, qualify as old growth. What criteria or definition(s) of old growth are you using? Please disclose how the project will impact the old-growth wildlife</p>	<p>←10b</p>	<p>As displayed in the Cooney McKay Vegetative Cover Maps for Alternative 3 - Modified (Maps 4A &amp; 4B) in the ROD, there is existing vegetative cover across the landscape, on both Forest Service ownership, private ownership, and other private corporate lands (PCTC). The NAIP imagery allows a visual display of the vegetative cover that currently exists on the landscape. The outlines overlaid on the imagery show where old growth stands are located on the landscape, where intermediate harvest is proposed, and where seed tree</p>

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<p>species, and mature forest associated species.</p>		<p>harvest is proposed. Only the seed tree harvest units would create openings that would not provide hiding cover for wildlife. The old growth stands would remain untreated under Alternative 3 - Modified, and the intermediate harvest units would still retain over 50 percent canopy cover following treatment. These maps were created to visually demonstrate that the amount of vegetative cover on the landscape would not change significantly from the existing condition with implementation of Alternative 3 - Modified.</p> <p>The commercial thinning, pre-commercial thinning, and thinning from below treatments would create a healthier, faster growing stand condition where the stand is more resistant to stand replacing fire than under current stand conditions. These stands are more likely to reach old growth conditions sooner with the proposed treatments, and they would be more resistant to a stand replacing wildfire. The analysis in the DEIS does not indicate that such treatments would sever habitat connections as stated in the comment (DEIS, pages 3-131 through 3-248).</p> <p>In addition to the intermediate harvest treatments described above, there are 79 acres of seed tree harvest (regeneration treatment) proposed in Alternatives 2 and 3. The seed tree harvest is proposed in stands that are exhibiting bark beetle mortality and root rot. The understories of these stands are primarily lodgepole pine and/or Douglas-fir, with minor components of other species. Ponderosa pine and western larch are currently minor components that are declining in health and vigor. The presence of western larch and ponderosa pine indicate the potential for these sites to support these species. These treatments would retain all ponderosa pine and western larch, removing Douglas-fir, lodgepole and other species. The intent of these treatments is to promote regeneration of western larch and ponderosa pine by reducing competition for resources, removing fuel loadings making them more resistant to disturbance, and increasing the amount of these species across the landscape.</p> <p>The project file contains more site specific data for these stands. Left unattended, the trajectory of these stands is toward increased mortality, and slow growth. These stands do not contain sufficient large trees to be considered old growth at this time, and the trend of the stands is to continue to unravel with increasing surface fuels, until a new stand is regenerated. In the absence of the proposed treatments, the most likely mechanism to regenerate these stands is a stand replacing fire. In neither the proposed action nor the No Action Alternative is the trajectory of these stands toward an old growth condition (DEIS, pages 3-43, 3-47, 3-48 and 3-49).</p>



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<p>the future. There is no scientific certainty in the FNF’s approach.</p> <p>Old Growth Maintenance units are being treated to remove mature lodgepole that is being attacked by insects and Douglas-fir that is affected by root rot. These insect and disease agents are already doing the thinning that will increase vigor of remaining larch and ppine. They will contribute some amount of ground fuels of course, once they fall, but the DEIS identifies them as mature and are not likely a result of fire exclusion. Therefore, there is no need to log them out.</p> <p>No site specific data is provided that describes why the current conditions are “unhealthy” or what has caused the “unhealthy” conditions in these stands are due to, although reference is made to fire exclusion. What site specific data does the FNF have which shows that lodgepole and Douglas-fir were not present in similar proportions historically? The site specific data used to make this determination should be provided to the public. The FNF appears to assume that fire exclusion has caused uncharacteristic abundance of lodgepole, Douglas-fir and other shade tolerant trees. The FNF’s proposal is not, however, to cease fire suppression or forest fragmentation due to roadbuilding and logging, which are responsible for fire exclusion, but rather the FNF proposes to continue, and even augment, these activities by more logging, roadbuilding and fire suppression. Furthermore, the FNF proposes the highly experimental, untested and questionable policy of maintaining unverified “historical stand conditions” through intensive stand manipulation by logging. A more sensible policy would involve a cessation of the factors responsible for fire exclusion followed by the reintroduction of controlled prescribed burning, which may or may not require slashing of small trees to reduce ladder fuels.</p> <p>An important finding of the Interior Columbia Ecosystem Basin Management Project (ICEBMP) is the historical abundance and ecological importance of old growth and, independent of old growth, of mid to large sized remnant trees in young forests or other stands that do not otherwise qualify as old growth. Overall in the Interior Columbia Basin (ICB), Hessburg et al (2000) found that “patch area with old forest-structures</p>	<p>←11a</p> <p>←11b</p> <p>←12a</p>	<p>to Comment #15 above, the final decision for this project will not include treatment in old growth stands. The old growth units will be deferred.</p> <p><b>Response to Comment #11a:</b> See Response to Comment #10d above.</p> <p><b>Response to Comment #11b:</b> There are numerous studies and literature on the historic forest composition and structure. The DEIS describes historic forest conditions in Chapters 1, 2, and 3.</p> <p>A comparison between the effects of road building and logging to that of an increase in stand density is an inappropriate comparison. Road building affects human access to the forest. Regeneration harvest affects the amount and juxtaposition of successional stages. In comparison, increases in stand density has an effect on the vigor of the forest, reducing the forests resistance to insects and disease due to a decrease in stand vigor, and increases the ability for a crown fire to spread. The Northern Region Overview on page 28 states “Significant increases in density, changes from shade intolerant to shade tolerant species, and a change to largely mid-seral structural stage has dramatically increased the risk to insect and disease disturbance and stand replacing fire well beyond historic levels.” The Northern Region Overview based this conclusion on the results of the Landscape Ecology Science Assessment, Interior Columbia Basin.</p> <p>Ceasing fire suppression would have undesired consequences, and would not be socially acceptable. Reducing the risk of wildfire, and the loss of these desired stand characteristics is the intent of these treatments. Using prescribed burning only, with limited slashing of small trees would not meet the purpose and need, nor would it be practical given the limitations regarding smoke management, manpower and time.</p> <p><b>Response to Comment 12a:</b> Stands across the analysis area were evaluated for old growth characteristics using Green et al. 1992, updated 2005. This information was used to help identify old growth habitat within the analysis area. All of the proposed treatments retain the majority of the larger trees, promoting growth towards meeting old growth characteristics, following the direction provided in Amendment 21.</p>

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<p>declined sharply in all ERUs where they historically occupied more than a minor area. The same was true of patches with remnant trees. In several ERUs, area with medium and large trees overshadowed or augmented losses to historical old-forest area. Our results suggested that 20<sup>th</sup> century timber harvest activities targeted patches with medium- and large-sized trees regardless of their structural affiliation.” They further state, “in the historical condition, large (&gt;63.5 cm DBH) and medium (40.5±63.5 cm DBH) trees were once more widely distributed in structures other than old forest as a conspicuous remnant after stand-replacing wildfires. Change analysis indicated that patches with medium and large trees were targeted for timber harvest, regardless of their structural affiliation.”</p> <p>Younger or mature stands with remnant medium and large sized trees would likely not meet Green et al and would not qualify as old growth, however, given their historical abundance they were undoubtedly an integral part of many species’ habitat requirements, are likely therefore of crucial importance to maintaining wildlife populations, and yet have significantly declined in abundance largely due to logging. This is a fact which is not accounted for, or acknowledged, by the Forest Service’s dependence on the maintenance of a small portion of old growth forest as a proxy for old-growth species viability and ultimately the maintenance of biodiversity that is an FS mandate. How can the FS claim that its strategy for maintaining old growth dependent species viability, or the viability of other species dependent on medium and large trees outside of or in addition to old growth, is therefore valid?</p> <p>There are important implications of these findings from the ICEBMP that we believe the FS must take into account. Hessburg et al (2000) enumerate these implications:</p> <p>There are at least two important ramifications: First, it has been broadly assumed that large trees are principally associated with old forests, where they contribute important living and dead structure. In some ERUs, old forest abundance was historically quite minimal (Table 3), but medium and large trees were distributed in other forest structures as a remnant after stand-replacing fires; in some cases, large trees comprised as much as 24% of the crown cover of forest structures, contributing important living and dead structure. Hence, some non-old forest structures of historical forest landscapes contributed a measure of late successional</p>	<p>←12b</p>	<p>On pages 3-179 through 3-194, the DEIS discloses existing conditions and effects of proposed activities on old growth habitat. The DEIS includes information on old growth patch size, interior integrity, roads, and habitat for associated species. Associated wildlife species that have a preference for old growth are addressed on pages 3-196 through 3-198 (bald eagle); pages 3-198 through 3-201 (black-backed woodpecker); pages 3-201 through 3-206 (fisher ); pages 3-206 through 3-211 (flammulated owl); pages 3-211 through 3-216 (goshawk); pages 3-241 through 3-248 (migratory birds) of the DEIS. Additional information is provided in the respective project files.</p> <p><b>Response to Comment 12b:</b> See Response to Comment #12a above. Coarse woody debris requirements are included for all stands including stands that were proposed for old growth treatments in the DEIS. Refer to the Design Criteria in Chapter 2 of the DEIS. Under the Selected Alternative described in this Record of Decision, no Old Growth Maintenance treatments will occur.</p>

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<p>functionality and connectivity with old forest.</p> <p>Second, where old forest area and area with remnant large trees has been depleted, the present and future supply of medium and large dead trees as snags and down logs is substantially diminished. This is especially true of snags and down logs of early seral species. We propose that terrestrial and aquatic species and processes requiring large dead tree structure may be adversely influenced by this reduction unless the shortfall is remedied through recruitment.</p> <p>Especially in a mixed severity fire regime as historically existed in the Cooney McKay project area—where remnant medium and large trees were likely a substantial component of the overall abundance of medium and large trees—this information brings to light the potentially fatal flaws of the FS strategy of managing old growth forest exclusively, without an adequate management strategy for medium and large trees outside of old growth. Medium and large tree structures that historically supported many forest species likely existed outside old growth, but potentially connecting old growth, through a patchwork of younger aged stands. How does the FS's species viability strategy take all of this information from the ICEBMP into account? How does the proposed logging strategy account for medium and large tree requirements outside of old growth by forest species that are currently or were historically found in the area? No Information in the DEIS addresses these questions.</p> <p>Not only does the FNF fail to account for the substantial lack of medium and large-sized trees on species viability, but even its dependence on substantially reduced areas of old growth is likely flawed. Especially in mixed severity fire regimes, the most likely outcome of old growth forest, and possibly one of the highest ecological uses of old growth forest, may be that it is highly valuable in its post fire state. Therefore, a strategy which depends on old growth habitat area as a proxy for species viability and thus attempts to protect old growth forest, not only from logging but also from ecosystem disturbances such as wildfire or insect attack, is likely doomed to failure. Hessburg et al (2000) expand on the dangers of this static, protectionist approach to old growth management:</p> <p>Results from both the interior Columbia Basin broad- (Hann et al., 1997) and mid-scale (Ottmar et al., 1999; Hessburg et al., 1999a) assessments suggest that in the interior, a two-pronged, dynamic</p>	<p>←12c</p> <p>←12d</p>	<p><b>Response to Comment #12c:</b> The wildlife analysis documented in the DEIS is a habitat-based analysis supported by scientific literature and the professional judgment of the District Wildlife Biologist. The DEIS (pages 3-161 through 3-248) and the BA indicate that the project would maintain adequate habitat within the analysis area. The BE is included in the DEIS.</p> <p>The analysis of wildlife species evaluated the existing habitat conditions within the analysis area and the effects the proposed action would have on their habitat. The Selected Alternative is consistent with the management direction related to Old Growth Forests as described by Amendment 21 to the Flathead Forest Plan.</p> <p><b>Response to Comment #12d:</b> Please See Response to Comment #10C above.</p>

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<p>and reserve system management approach may be needed to ensure recovery of the northern spotted owl and associated species. In the short term (e.g., 50±100 years), it is likely that areas currently functioning as late-successional and old forest habitats will be maintained with only limited success. Risk of disturbance and uncertainty of outcomes will be high. Over that period, some areas will be affected by stand replacement fires, and will cease to function as late successional habitat. For example, since, 1994, 10 of 140±180 (6±7%) northern spotted owl nest stands and neighborhoods were lost to uncontrolled wildfires on the Wenatchee National Forest alone.</p> <p>How does the FS's management strategy, represented here by the Cooney McKay project—which involves the almost exclusive dependence of species viability on strictly defined and static old growth forest proxies, suppression of manageable fires and the inability to suppress large fires, the well documented tendency to follow these fires with harvest of medium and large dying, dead and even some living trees in areas not designated as old growth—account for the substantial evidence of the current lack, but historical importance of medium and large trees both within and outside of old growth, as presented above?</p> <p>An old growth protectionist strategy may be an important part of the longer term strategy to maintain old growth forest and viability of associated species, but this will only be effective if accompanied by recruitment of effective replacement old growth and the creation and maintenance of medium and large trees outside of old growth stands. Hessburg et al (2000) corroborate the importance of several reserve design features:</p> <p>Patterns of structure and composition within the NWFP reserve network will continue to change as a result of uncontrolled fires, insect outbreaks, and other succession processes. What may be needed is an approach that marries a short term system of reserves with a long term strategy to convert from a reserve system to a continuous network of landscapes with dynamic properties. In such a system, late-successional elements with semi-predictable environmental settings (sensu Camp et al., 1997) are continuously recruited, but shifting in landscape position across space and time.</p>	<p>←12e</p>	<p><b>Response to Comment #12e:</b> Please see Response to Comment #10c above.</p>



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<p>The FS emphasizes the lack of old-growth ponderosa pine in the area but fails to mention how much old-growth Doug fir is in the area compared to “historic conditions”.</p> <p>The DEIS seems to be saying that no old-growth has been cut down in the project area. DEIS at 3-39 - 3-40. Nowhere in the harvest history does it say that old trees or old growth have been cut down. Is that correct?</p> <p>A black-backed woodpecker assessment (Hillis et al., 2003) notes that the black-backed woodpecker depends upon the very forest conditions that the scoping notice vilifies:</p> <p style="padding-left: 40px;">Black-backed woodpeckers occupy forested habitats that contain high densities of recently dead or dying trees that have been colonized by bark beetles and woodborer beetles (Buprestidae, Cerambycidae, and Scolytidae). These beetles and their larvae are most abundant within burned forests. In unburned forests, bark beetle and woodborer infested trees are found primarily in areas that have undergone natural disturbances, such as wind-throw, and within structurally diverse old-growth forests. (Internal citations omitted.)</p> <p>...Black-backed woodpeckers also occur in unburned landscapes Bull et al.1986, Goggans et al. 1987, Bate 1995, Hoffman 1997, Weinhagen 1998, Steeger and Dulisse in press, Taylor unpublished data). Taylor’s observations of black-backed woodpeckers in unburned forests in northern Idaho suggest that they may occur at substantially lower densities in unburned forests,</p>	<p>←15</p> <p>←16</p> <p>←17</p>	<p>Compliance with NFMA Requirements to Provide for Diversity of Animal Communities,” which addresses the natural history, population, habitat, and distribution of wildlife species which can be found on the Flathead National Forest. This document discusses the threats to the different species, conservation measures in place to address those threats, and an evaluation of the current situation for the different species at the Forest and Regional level. This information is useful in the analysis of impacts to species and populations from proposed activities to determine whether impacts may be significant or not.</p> <p><b>Response to Comment #15:</b> There is no treatment proposed in old growth Douglas-fir stands. There would be no reduction in these old growth forest types.</p> <p><b>Response to Comment #16:</b> The amount of old-growth Douglas-fir is not affected by the proposed action, and is still present on the landscape. The project is specifically focused on maintaining the remaining old-growth ponderosa pine. The DEIS states on page 3-39 that “Commercial harvest in the 1960s removed mostly large diameter ponderosa pine, western larch and Douglas-fir.” This can be assumed to have been largely what is considered by today’s definitions as “old-growth.”</p> <p>The majority of the trees to be removed in the proposed treatments are not mature old-growth trees, but mostly smaller diameter understory trees.</p> <p><b>Response to Comment #17:</b> Refer to Response to Comment #8. The DEIS discloses the effects to this species on pages 3-198 through 3-201. The effects of fire suppression on the black-backed woodpecker are discussed in the Cumulative Effects Worksheet in Project File Exhibit F-10.</p>

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<p>but no rigorous comparisons between black-backed woodpecker densities in burned and unburned forests have been done. Hutto (1995) hypothesized that black-backed woodpeckers reproduce at <i>source</i> reproductive levels in burns, but may drop to <i>sink</i> reproductive levels in the intervening periods between large burns.</p> <p>Dolan (1998a,b) states in regards to impacts on the black-backed woodpecker due to fire suppression and post-fire logging states:</p> <p style="padding-left: 40px;">It seems that we have a huge cumulative effects problem here, and that each salvage sale removes habitat that is already very limited. We are having trouble avoiding a “trend to federal listing” call for the BBWO in salvaging burns, unless comparable acres of fire-killed dead are being created through prescribed burns.</p> <p>The comments by other biologists attached to Dolan, 1998a,b reveal that no one has yet designed a consistent, workable, scientifically defensible strategy to ensure viable populations of the black-backed woodpeckers. Fire suppression, insect and disease suppression, and “salvage” logging policies of the Flathead 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 Flathead NF’s ongoing fire suppression policy will remain unexamined.</p> <p>Please consider that thinning can result in faster fire spread than in the unthinned stand. Graham, et al., 1999a point out that fire modeling indicates:</p> <p style="padding-left: 40px;">For example, the 20-foot wind speed<sup>2</sup> must exceed 50 miles per hour for midflame wind speeds to reach 5 miles per hour within a dense Stand (0.1 adjustment factor). In contrast, in an open stand (0.3 adjustment factor), the same midflame wind speeds would occur at only a 16-mile-per-hour wind at 20 feet.</p> <p>Cohen and Butler (2005) state similarly for fuel reduction along road corridors:</p> <p style="padding-left: 40px;">It should be noted that areas of such fuel reduction become windier and drier in the surface fuels. The fuel reduction significantly decreases the overall fire intensity along both sides of the road but does not prevent fire occurrence and may <b>enhance surface</b></p>	<p>←18</p>	<p><b>Response to Comment #18:</b> The DEIS discloses the effects of the proposed activities on pages 3-83 through 3-101. The thinning activities include treatment of the activity fuels created, as is recommended in the literature you cite.</p> <p>The overall rate of spread, as well as the flame lengths will be reduced as a result of the treatments, providing a greater likelihood that the fire can be managed with ground forces, reducing the potential for the fire to become extreme.</p>

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<p><b>spread.</b> (Emphasis added.)</p> <p>Graham, et al., 1999a also state:</p> <p>Depending on the type, intensity, and extent of thinning, or other treatment applied, fire behavior can be improved (less severe and intense) or exacerbated.” ... Fire intensity in thinned stands is greatly reduced if thinning is accompanied by reducing the surface fuels created by the cuttings. Fire has been successfully used to treat fuels and decrease the effects of wildfires especially in climax ponderosa pine forests (Deeming 1990; Wagel and Eakle 1979; Weaver 1955, 1957). In contrast, extensive amounts of untreated logging slash contributed to the devastating fires during the late 1800s and early 1900s in the inland and Pacific Northwest forests.</p> <p>In their conclusion, Graham, et al., 1999a state:</p> <p>Depending on intensity, thinning from below and possibly free thinning can most effectively alter fire behavior by reducing crown bulk density, increasing crown base height, and changing species composition to lighter crowned and fire-adapted species. Such intermediate treatments can reduce the severity and intensity of wildfires for a given set of physical and weather variables. But crown and selection thinnings would not reduce crown fire potential.</p> <p>Since the scientific literature suggests that your thinning activities will actually increase the rate of fire spread, you need to reconcile such findings with the contradictory assumptions expressed in your scoping letter.</p> <p>We believe that high intensity forest manipulation as proposed will not lend towards “restoring” functioning ecosystems. Rather, logging will disrupt the natural forest succession and the natural recovery from past disturbances that is already occurring. Insect infestations are a natural and essential component of forest ecosystems, and the presence of such indicates a degree of ecosystem function. Beschta et al., 1995 state, “Land managers should be managing for the naturally evolving ecosystems, rather than perpetuating artificial ones we have attempted to create.”</p>	<p>←19</p>	<p><b>Response to Comment #19:</b> The proposed treatments are designed with ecosystem processes in mind, and are intended to improve forest resiliency and function. By reducing the increased stand densities and removing the accumulated fuel loadings, there will be a higher likelihood that it will be able to sustain the desired ecosystem components and processes in the future.</p> <p>The proposed treatments will provide for the allowance of fire to occur and begin to resume its natural role in the ecosystem by reducing fuels, creating conditions more similar to those that occurred when fire was an integral</p>

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<p>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 <i>processes</i> that naturally shaped the ecosystem and resulted in a range of natural structural conditions.</p> <p>McClelland (undated) states:</p> <p style="padding-left: 40px;">The snags per acre approach is not a long-term answer because it concentrates on the products of ecosystem processes rather than the processes themselves. It does not address the most critical issue--long-term perpetuation of diverse forest habitats, a mosaic pattern which includes stands of old-growth larch. <b>The processes that produce suitable habitat must be retained or reinstated by managers. Snags are the result of these processes (fire, insects, disease, flooding, lightning, etc.).</b> (Emphasis added.)</p> <p>And Hutto, 1995 also addresses the <i>processes</i> topic, in that case about fire:</p> <p style="padding-left: 40px;">Fire is such an important creator of the ecological variety in Rocky Mountain landscapes that the conservation of biological diversity [required by NFMA] is likely to be accomplished only through the conservation of fire <b>as a process</b>...Efforts to meet legal mandates to maintain biodiversity should, therefore, be directed toward maintaining processes like fire, which create the variety of vegetative cover types upon which the great variety of wildlife species depend. (Emphasis added.)</p> <p>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 Flathead NF’s fire suppression policy.</p> <p>Many adverse consequences to soil, ecological processes, wildlife, and other elements of the natural environment are associated with logging, including thinning. (Ercelawn, 1999; Ercelawn, 2000.) For example: “Salvage or thinning operations that remove dead or decayed trees or coarse woody debris on the ground will reduce the availability of forest structures used by fishers and lynx.” (Bull et al., 2001.)</p>	<p style="text-align: center;">←20</p> <p style="text-align: center;">←21</p>	<p>disturbance on the landscape.</p> <p><b>Response to Comment #20:</b> Effects of fire suppression are included in the cumulative effect analysis in Chapter 3 of the DEIS. Additional information is located in the Cumulative Effects Worksheets for each resource in the project file.</p> <p><b>Response to Comment #21:</b> Thank you for the information. Fisher and its associated habitat is discussed in the DEIS from pages 3-201 through 3-206. Lynx and its associated habitat is discussed in the DEIS from pages 3-164 through 3-168. Included in the Design Criteria in the Cooney McKay ROD, Appendix 2, are objectives that pertain to the maintenance of woody debris for nesting, feeding and denning habitat for species such as the fisher and lynx.</p>



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<p>Although usually viewed as pests at the tree and stand scale, insects and disease organisms perform functions on a broader scale.</p> <p>...Pests are a part of even the healthiest eastside ecosystems. Pest roles—such as the removal of poorly adapted individuals, accelerated decomposition, and reduced stand density—may be critical to rapid ecosystem adjustment.</p> <p>...In some areas of the eastside and Blue Mountain forests, at least, the ecosystem has been altered, setting the stage for high pest activity (Gast and others, 1991). This increased activity does not mean that the ecosystem is broken or dying; rather, it is <u>demonstrating functionality, as programmed during its developmental (evolutionary) history.</u> (Emphasis added.)</p> <p>A shift in forest structure including the pattern or arrangement of the Flathead NF forest communities has occurred, and could affect resilience and the sustainability of historic ecological relationships. This is based upon our awareness of the degree of logging and roadbuilding in recent decades, causing significantly reduced amounts of late successional forest habitat, snags, large woody debris, loss and fragmentation of the remaining mature and late successional interior habitat in the roaded areas. 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 roadbuilding has—and will to an increased degree, if the proposed activities are carried out.</p> <p>Please disclose the names of all other past logging and burning projects (implemented since the original Forest Plan) whose analysis area(s) encompass the areas to be logged under this proposal. Please disclose if the FS has performed all of the monitoring and mitigation required or recommended in any NEPA documents, and the results of the monitoring. Lacking such knowledge, justification for more ecosystem manipulation is</p>	<p>←25</p> <p>←26</p>	<p>increased activity is related to the increased densities, which is the primary factor of concern.</p> <p><b>Response to Comment #25:</b> There are numerous studies and literature on the historic forest composition and structure. The DEIS describes historic forest conditions in Chapters 1, 2, and 3.</p> <p>A comparison between the effects of road building and logging to that of an increase in stand density is an inappropriate comparison. Road building affects human access to the forest. Regeneration harvest affects the amount and juxtaposition of successional stages. In comparison, increases in stand density has an effect on the vigor of the forest, reducing the forests resistance to insects and disease due to a decrease in stand vigor, and increases the ability for a crown fire to spread. The Northern Region Overview on page 28 states “Significant increases in density, changes from shade intolerant to shade tolerant species, and a change to largely mid-seral structural stage has dramatically increased the risk to insect and disease disturbance and stand replacing fire well beyond historic levels.” The Northern Region Overview based this conclusion on the results of the Landscape Ecology Science Assessment, Interior Columbia Basin.</p> <p><b>Response to Comment #26:</b> The past, present, and reasonably foreseeable future actions on NFS lands and private lands in the Cooney McKay Project area have been listed on pages 3-4 through 3-10 in the DEIS and analyzed in the cumulative effects sections for each resource. Each Resource Specialist has also prepared a Cumulative Effects Worksheet that addresses if and how each of these past, present, and foreseeable activities have affected their</p>

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<p>lacking.</p> <p>Please include a map in the EIS that clarifies roadless boundary issues. It is not adequate to merely accept previous, often arbitrary roadless inventories—unroaded areas adjacent to inventoried areas were often left out.</p> <p>The EIS must demonstrate that the proposed activities would be in compliance with all of the Forest Plan wildlife standards, and with NFMA's population viability provisions.</p> <p>As far as we're aware, the Flathead NF has never determined minimum viable populations for any MIS or TES species as NFMA requires, nor has it specified the amount and distribution of habitat necessary to maintain viable populations. Nor has it monitored population trends of indicator species, as NFMA requires. The EIS must disclose the range of populations of MIS or TES species, and the historic range of important habitat components and spatial considerations.</p> <p>Unfortunately, region-wide the FS has failed to meet Forest Plan old-growth standards, does not keep accurate old-growth inventories, and has not monitored population trends in response to management activities as</p>	<p></p> <p>←27</p> <p>←28a</p>	<p>resource. These worksheets are located in the individual resources areas of the project file. The affected environment also reflects the conditions as they exist today which provide information as to how past projects may have affected individual resources.</p> <p>Condon Fuels and Meadow Smith Projects activities are located within the Cooney McKay Project Area and contain monitoring plans. Timber harvest authorized under the Condon Fuels Project has recently been completed. Monitoring for this sale is currently being conducted and is expected to be completed in the next several years. Monitoring of the Timber Sale Contract has been done by the Sale Administrator and Engineering Representative. Documentation is available in the inspection reports. The Meadow Smith Project has not been implemented yet on the ground, therefore monitoring is not completed. The Forest is not aware of instances in which project level monitoring results have indicated issues that warrant significant additional monitoring, mitigation, and or actions. Administration and monitoring of the selected activities is critical to ensuring project activities are implemented according to plan.</p> <p><b>Response to Comment #27:</b> The Cooney McKay Project area does not contain any Inventoried Roadless Areas.</p> <p><b>Response to Comment #28a:</b> The Cooney McKay DEIS describes existing conditions and reasonably foreseeable activities, and proposed activities and their effects on wildlife on pages 3-161 through 3-248 of the DEIS.</p> <p>In addition, the project file includes references to the following documents: "A Conservation Assessment of the Northern Goshawk, Black-backed Woodpecker, Flammulated Owl, and Pileated Woodpecker in the Northern Region, USDA Forest Service" Samson (2006), demonstrate that the Northern Region and the Flathead National Forest provide for the diversity of plant and animal communities for those species listed above. "Habitat estimates for maintaining viable populations of the northern goshawk, black-backed woodpecker, flammulated owl, pileated woodpecker, American marten and fisher" also cited as Samson (2006) clearly demonstrate that the Northern Region and the Flathead National Forest provide more than enough habitat to meet the threshold to maintain minimum viable populations of the</p>

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<p>required by Forest Plans and NFMA (Juel, 2003).</p> <p>Juday (1978) discusses in detail how the protection of old-growth forests greatly sustains the many uses of our national forests, as mandated by the Multiple Use-Sustained Yield Act and the National Forest Management Act.</p> <p>USDA Forest Service (2004a) discusses the value of small patches of old-growth habitat and cites scientific studies and lists many adverse impacts from fragmentation of old growth habitat:</p> <p>Harvesting or burning adjacent to old growth can remove the edge buffer, reducing the effective size of old growth stands by altering interior habitats (Russell and Jones 2001). Weather-related effects have been found to penetrate over 165 feet into a stand; the invasion of exotic plants and penetration by predators and nest parasites may extend 1500 feet or more (Lidicker and Koenig 1996).</p> <p>...Harvest or burning in stands immediately adjacent to old growth mostly has negative effects on old growth, but may have some positive effects. Harvesting or burning adjacent to old growth can remove the edge buffer, reducing the effective size of old growth stands by altering interior habitats (Russell and Jones 2001). Weather-related effects have been found to penetrate over 165 feet into a stand; the invasion of exotic plants and penetration by predators and nest parasites may extend 1500 feet or more (Lidicker and Koenig 1996).</p> <p>... The occurrence of roads can cause substantial edge effects on</p>	<p>←28b</p>	<p>Management Indicator and Sensitive species analyzed in that report.</p> <p>Project File Exhibit F-2, "Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities," which addresses the natural history, population, habitat, and distribution of wildlife species which can be found on the Flathead National Forest. This document discusses the threats to the different species, conservation measures in place to address those threats, and an evaluation of the current situation for the different species at the Forest and Regional level. This information is useful in the analysis of impacts to species and populations from proposed activities to determine whether impacts may be significant or not.</p> <p>Compliance with Forest Plan Old Growth standards is discussed in the Old Growth Section of the DEIS, pages 3-179 through 3-194. The DEIS discloses that old growth forest habitat comprises approximately 10 to 14 percent of the Cooney McKay Project area, depending on whether PCTC lands and other private lands are included in the base acreage.</p> <p><b>Response to Comment #28b:</b> As stated above, stands across the analysis area were evaluated for old growth characteristics. The Western Montana Zone Old Growth Type Characteristics were used to classify old growth forests (Green et al. 1992, updated 2005). This information was used to help identify old growth habitat within the project area. All stands old growth stands were evaluated to determine the best availability and distribution of old growth habitat following Forest Plan direction. The DEIS discloses the existing conditions and the effects of proposed activities on old growth habitat on pages 3-179 through 3-194. The DEIS includes information on old growth patch size, interior habitat, roads, and habitat for associated species.</p>

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<p>forested stands, sometimes more than the harvest areas they access (Reed, et al. 1996; Bate and Wisdom, in prep.). Roads that are open to the public expose many important wildlife habitat features in old growth and other forested stands to loss through firewood gathering and increased fire risk.</p> <p>Effects of disturbance also vary at the landscape level. Conversion from one stand condition to another can be detrimental to some old growth associated species if amounts of their preferred habitat are at or near threshold levels or dominated by linear patch shapes and limited interconnectedness (Keller and Anderson 1992). Reducing the block sizes of many later-seral/structural stage patches can further fragment existing and future old growth habitat (Richards et al. 2002). Depending on landscape position and extent, harvest or fire can remove forested cover that provides habitat linkages that appear to be “key components in metapopulation functioning” for numerous species (Lidicker and Koenig 1996, Witmer et al. 1998).</p> <p>For viability to be insured, the FS must maintain enough old-growth habitat for decades to come on the Flathead NF. 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, land exchange, wildland fire, poorly implemented old growth “restoration treatments”, or simple forest succession during original Forest Plan implementation. Please disclose the best information as to the impacts of this cumulative loss of old growth on wildlife species. Please disclose the best information on how much effective old growth is expected to be lost in the future due to these effects.</p> <p>USDA Forest Service (1999a) discussed the relationship between wildlife species and the habitat components found only in mature an old growth forests:</p> <p>Fishers occur most commonly in landscapes dominated by mature to old-forest cover.” (II-254.) “Fishers prefer habitats with high canopy closure (greater than 80 percent) and avoid areas with low canopy closure (less than 50 percent). ...The habitat requirements of fishers are thought to be associated with the physical structure of the forest and associated prey. This structure includes the</p>	<p>←29</p> <p>←30</p>	<p><b>Response to Comment #29:</b> The Fire/Fuels analysis (DEIS, pages 3-83 through 3-101) discusses the fire history in the analysis area. Old growth stands have been affected by these disturbances. There exist no historical records, especially prior to the 1987 Forest Plan, of how much old growth was affected. The old growth section of the DEIS (on pages 3-183 and 3-184) discusses and compares the historic condition of old growth as it compares to the current conditions. For more information regarding old growth on the Flathead National Forest, refer to the Final Environmental Impact Statement, Amendment 21 (USDA 1999).</p> <p>Habitat conditions for old growth associated species and snag dependent species in the analysis area were analyzed and discussed in the DEIS (3-179 through 3-194 and 3-223 through 3-229). The Cooney McKay Project is consistent with the NFMA and with Forest Plan Amendment 21.</p> <p>After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed actions.</p> <p><b>Response to Comment #30:</b> Thank you for the information. The analysis of</p>

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<p>vertical and horizontal complexity created by a diversity of trees sizes and shapes, light gaps, dead and downed wood and layers of overhead cover. Large-diameter spruce and grand-fir snags and large downed material are used for denning and foraging. Fishers tend to avoid non-forested areas. (III-254.)</p> <p>Many wildlife species occurring on the IPNF prefer or only occur in mature and old-growth forests. Mature and old forests are more likely than younger forests to provide habitat for species which prefer large trees, structural and biological diversity, and closed canopies, and/or which depend on snags or down logs for nesting, foraging or raising their young. (Id. at III-243.)</p> <p>Over 40 wildlife species depend on snags (dead trees) for their forage, cover or a place to raise their young. (III-244.)</p> <p>Existing structurally immature stands could provide old-growth habitat over time if not disturbed or if managed to maintain large, old, diseased and dead structural components of the forest within the levels needed to provide suitable habitat. (III-243.)</p> <p>Most species identified as “Sensitive” by the Forest Service are associated with later successional habitats, or habitat and cover types in short supply (such as cottonwood communities, large standing dead trees or large downed trees.). (III-244.)</p> <p>Large-diameter snags provide habitat for the greatest variety of cavity users and remain standing longer than smaller snags. (III-244.)</p> <p>Snags provide den sites for fishers and other mammals, and roosts for several species of bats and owls. (III-244.)</p> <p>Goshawks have habitat requirements associated with components and attributes of late successional forests. While associated with mature to old growth habitat, they utilize other successional stages. For example, feeding habitat can be found in pole-sized timber stands. ...Old growth is important for northern goshawks not only for prey species habitat but also for the large trees that provide the substrate for their substantial nest structures. (III-255.)</p>		<p>sensitive species included a discussion of existing habitat and habitat conditions for the different species which may be found within the project area (DEIS 3-194 through 3-223). Determinations were made on whether significant impacts would occur. The wildlife analysis also included discussion of Forest Management Indicator Species and migratory birds (DEIS 3-230 through 3-248). After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed actions.</p> <p>The project file contains the document, “Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities,” which addresses the natural history, population, habitat, and distribution of wildlife species which can be found on the Flathead National Forest. This document discusses the threats to the different species, conservation measures in place to address those threats, and an evaluation of the current situation for the different species at the Forest and Regional level. This information is useful in the analysis of impacts to species and populations from proposed activities to determine whether impacts may be significant or not.</p> <p>Included in the Design Criteria in the Cooney McKay ROD, Appendix 2 are several objectives that pertain to the maintenance of snags and large woody debris for nesting, feeding and denning habitat for species such as the fisher and lynx.</p>

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<p>In the western United States, marten are most abundant in mature to old-growth true-fir or spruce-fir forests and generally avoid open, drier coniferous forest. They prefer forest stands greater than 40 percent tree canopy closure, which protects them from predators and enhances the moist conditions favorable for prey species. (III-257.)</p> <p>Marten are closely associated with mature to old-growth timber stands, preferring moist habitat types where small mammals are more abundant. American marten prefer stands with greater than 40 percent canopy closure, and tend to avoid those stands with less than 30 percent closure. In addition to a closed canopy, marten require an abundance of large downed logs and snags. This provided secure resting locations, denning habitat and winter access to small mammals living beneath the snow. (III-580, 581.)</p> <p>Pileated Woodpecker. This species nests and roosts in cavities in large diameter (20 inches diameter or greater) live or dead trees. It selects nest trees in clumps of snags in stands with at least 70% canopy cover. ...Pileated woodpeckers feed on beetles, carpenter ants and other insects in live and dead trees, logs and stumps. (III-258.)</p> <p>The Flathead NF has failed to cite any evidence that its managing for “large tree” (i.e., old growth) strategy will improve old growth or old-growth wildlife species habitat over the short-term or long-term. In regards to this popular, but unproven FS theory:</p> <p>(T)here is the question of the appropriateness of management manipulation of old-growth stands... Opinions of well-qualified experts vary in this regard. As long term results from active management lie in the future – likely quite far in the future – considering such manipulation as appropriate and relatively certain to yield anticipated results is an informed guess at best and, therefore, encompasses some unknown level of risk. <u>In other words, producing “old-growth” habitat through active management is an untested hypothesis.</u></p>	<p>←30a</p>	<p><b>Response to Comment #30a:</b> Forest Plan Amendment 21 provides direction for old growth maintenance, recruitment and management. Strategies include retention of large diameter trees in all treatment units, commercial thinning of younger stands to increase large tree diameter growth, and reducing the potential for loss of these components due to wildfire.</p>

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<p>(Pfister et al., 2000, pp. 11, 15 emphasis added). Please disclose the best information from Flathead 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. Please disclose the best information from Flathead NF monitoring for the presence of old growth wildlife species in areas previously treated as now proposed. Presently we have no reason to believe anything other than logging the proposed areas will reduce soil productivity, reduce their natural qualities, reduce their habitat value for wildlife, and reduce their resiliency to subsequent disturbance, such as fire.</p> <p>Since such a view of old-growth management generally favors one type of old growth, i.e., one that is characterized by relatively open canopy closure and not very dense with trees, the Flathead NF must disclose which, if any, MIS are to “indicate” for this kind of old-growth habitat, and if none do, designate an appropriate, scientifically justified MIS.</p>	<p>←31</p>	<p><b>Response to Comment #31:</b> The final decision for this project is to select Alternative 3 - Modified, as described in the ROD. Under this alternative there would be no treatment in old growth stands. The rationale for deferring the old growth treatments is provided in more detail in the ROD. The DEIS discloses the effects of proposed activities on soils, wildlife, and fuels within the analysis area including old growth.</p>
<p>Lesica (1995) stated that maintaining 10% of forests as old growth may result in extirpation of some wildlife species. This is based on his estimate that 20-50% of low and many mid-elevation forests were in old growth condition prior to European settlement. Is it the Flathead NF’s position that maintaining a certain percentage of old growth on the Forest is enough to maintain population viability of all species needing old-growth habitat? If so, what scientifically based rationale (i.e., research results) is the Flathead 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? Given the extreme amount of logging done on national forest land in the Flathead NF, we expect that there had to be much more than the present level of old growth than there is now. The EIS’s analysis must deal with that very basic fact.</p> <p>USDA Forest Service, 2004a at page 3-199 states:</p> <p style="padding-left: 40px;">Across the Interior Columbia River Basin (Quigley, et al. 1996), old forests have declined by 27 to 60 percent over that past 100 years and large residual trees and snags have decreased by 20 percent. Fire exclusion and timber harvest</p>	<p>←32</p>	<p><b>Response to Comment #32:</b> As stated above, stands across the analysis area were evaluated for old growth characteristics. The Western Montana Zone Old Growth Type Characteristics were used to classify old growth forests (Green et al. 1992, updated 2005). This information was used to help identify old growth habitat within the project area. All stands old growth stands were evaluated to determine the best availability and distribution of old growth habitat following Forest Plan direction. The old growth section of the DEIS (on pages 3-183 and 3-184) discusses and compares the historic condition of old growth as it compares to the current conditions. The DEIS discloses the existing conditions and the effects of proposed activities on old growth habitat on pages 3-179 through 3-194. The DEIS includes information on old growth patch size, interior habitat, roads, and habitat for associated species.</p> <p>Habitat conditions for old growth associated species and snag dependent species in the analysis area were analyzed and discussed in the DEIS (3-179 through 3-194 and 3-223 through 3-229). After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed actions. The Cooney McKay Project is consistent with the NFMA and with Forest Plan Amendment 21. Currently 10 to 14 percent of the analysis area supports old</p>

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<p>have altered the structure and composition of forests throughout the Basin, resulting in a 60 percent increase in susceptibility to insects, disease, and stand-replacing fires. These changes have contributed to declining habitat conditions for numerous species of wildlife associated with old growth forests.</p> <p>The Flathead NF is home to the Canada lynx, listed as a Threatened species under the Endangered Species Act (ESA). In December 1999, the Forest Service and Bureau of Land Management completed their "Biological Assessment Of The Effects Of National Forest Land And Resource Management Plans And Bureau Of Land Management Land Use Plans On Canada Lynx" (Programmatic Lynx BA). The Programmatic Lynx BA concluded that the current programmatic land management plans "may affect, and are likely to adversely affect, the subject population of Canada lynx."</p> <p>The Lynx BA team recommended amending or revising Forest Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects on lynx. The Programmatic Lynx BA's determination means that Forest Plan implementation is a "taking" of lynx, and makes Section 7 formal consultation on the Flathead NF Plan mandatory, before actions such as the proposed project are approved.</p> <p>Continued implementation of the Forest Plan constitutes a "taking" of the lynx. Such taking can only be authorized with an incidental take statement, issued as part of a Biological Opinion (B.O.) during of Section 7 consultation. The Flathead 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.</p> <p>The Programmatic Lynx BA's "likely to adversely affect" conclusion was based upon the following rationale. Plans within the Northern Rockies:</p> <ul style="list-style-type: none"> <li>generally direct an aggressive fire suppression strategy within developmental land allocations. ...this strategy may be contributing to a risk of adversely affecting the lynx by limiting the availability of</li> </ul>	<p>←33</p>	<p>growth. For more information regarding old growth on the Flathead National Forest, refer to the Final Environmental Impact Statement, Amendment 21 (USDA 1999).</p> <p>In addition, proposed intermediate harvest treatments would tend to move stands more rapidly toward old growth conditions, a positive move towards old growth connectivity. The commercial thinning, pre-commercial thinning, and thinning from below treatments would create a healthier, faster growing stand condition where the stand is more resistant to stand replacing fire than under current stand conditions. These stands are more likely to reach old growth conditions sooner with the proposed treatments, and they would be more resistant to a stand replacing wildfire.</p> <p>The final decision for this project is to select Alternative 3 - Modified, as described in the ROD. Under this alternative, there would be no treatment in old growth stands and the intermediate harvest units would retain over 50 percent canopy cover following treatment. The rationale for deferring the old growth treatments is provided in more detail in the ROD.</p> <p><b>Response to Comment #33:</b> The Cooney McKay DEIS demonstrates full compliance with the conservation measures, standards and guidelines described in the previous LCAS and the standards and guidelines outlined in the more recent Northern Rockies Lynx Management Amendment (NRLA). The project is also compatible with recommendations in the Lynx Science Report.</p> <p>The lynx analysis is displayed in the DEIS on pages 3-164 through 3-168. A BA was also prepared resulting in a "May affect – not likely to adversely affect" determination. The FWS concurred with the determinations. Conservation measures and standards are fully described in the BA. Past, current, and reasonably foreseeable actions in conjunction with the Cooney McKay Project are discussed in the DEIS on pages 3-165 and through 3-168, as well as in more detail in the Cumulative Effects Worksheet, Project File Exhibit F-7.</p>

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<p>foraging habitat within these areas.</p> <ul style="list-style-type: none"> <li>• allow levels of human access via forest roads that may present a risk of incidental trapping or shooting of lynx or access by other competing carnivores. The risk of road-related adverse effects is primarily a winter season issue.</li> <li>• are weak in providing guidance for new or existing recreation developments. Therefore, these activities may contribute to a risk of adverse effects to lynx.</li> <li>• allow both mechanized and non-mechanized recreation that may contribute to a risk of adverse effects to lynx. The potential effects occur by allowing compacted snow trails and plowed roads which may facilitate the movements of lynx competitors and predators.</li> <li>• provide weak direction for maintaining habitat connectivity within naturally or artificially fragmented landscapes. Plans within all geographic areas lack direction for coordinating construction of highways and other movement barriers with other responsible agencies. These factors may be contributing to a risk of adverse effects to lynx.</li> <li>• are weak in providing direction for coordinating management activities with adjacent landowners and other agencies to assure consistent management of lynx habitat across the landscape. This may contribute to a risk of adverse effects to lynx.</li> <li>• fail to provide direction for monitoring of lynx, snowshoe hares, and their habitats. While failure to monitor does not directly result in adverse effects, it makes the detection and assessment of adverse effects from other management activities difficult or impossible to attain.</li> <li>• forest management has resulted in a reduction of the area in which natural ecological processes were historically allowed to operate, thereby increasing the area potentially affected by known risk factors to lynx. The Plans have continued this trend. The Plans have also continued the process of fragmenting habitat and reducing its quality and quantity. Consequently, plans may risk adversely affecting lynx by potentially contributing to a reduction in the geographic range of the species.</li> <li>• The BA team recommends amending or revising the Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects to lynx. The programmatic conservation measures listed in the Canada Lynx Conservation Assessment and Strategy (LCAS) should be considered in this regard, once finalized. (Programmatic Lynx BA, at 4.)</li> </ul>		

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<p>The Programmatic Lynx BA notes that the LCAS identifies the following risk factors to lynx in this geographic area:</p> <ul style="list-style-type: none"> <li>• Timber harvest and precommercial thinning that reduce denning or foraging habitat or converts habitat to less desirable tree species</li> <li>• Fire exclusion that changes the vegetation mosaic maintained by natural disturbance processes</li> <li>• Grazing by domestic livestock that reduces forage for lynx prey</li> <li>• Roads and winter recreation trails that facilitate access to historical lynx habitat by competitors</li> <li>• Legal (in Montana) and incidental trapping and shooting</li> <li>• Predation</li> <li>• Being hit by vehicles</li> <li>• Obstructions to lynx movements such as highways and private land development</li> </ul> <p>As evidenced by the fact that the Canada lynx is now listed under the Endangered Species Act, it is clear that the Flathead NF must do more than follow its Forest Plan's weak protections provided for lynx. The EIS must demonstrate that the project and its analysis are consistent with all Standards contained in the Lynx Conservation and Assessment Strategy (LCAS).</p> <p>The USFWS listing of the lynx as "threatened," rather than endangered, and the failure to designate critical habitat, was recently held to be a violation of the ESA. <i>Defenders of Wildlife v. Norton</i>, Civ. No. 00-2996 (GX) (DCDC, 2003). According to that decision, "[w]ithout the designation of its critical habitat, and the protections which flow from such designation, the Lynx would be subject to further extirpation and 'destruction or adverse modification of [its] habitat. 16 U.S.C. 1536(a)(2).'" <i>Ibid.</i> at p. 31. The project area may well end up being designated as critical habitat. It is thus unlawful to proceed with further adverse modifications of lynx habitat pending final designation of critical habitat.</p>		



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<p>existing Plan direction to maintain old growth habitat was judged to be adequate to provide for lynx denning habitat for all geographic areas except the Great Lakes. (BO at 31.)</p> <p>However, the Flathead NF cannot meet lynx denning requirements unless it is meeting Forest Plan old-growth requirements. The Programmatic BA's analysis of the ability of the Forest Plans, as "amended" by the LCAS, to prevent a "taking" of the lynx is based upon the Forests' meeting such management standards. As the Flathead NF has not yet proved it is in compliance with old-growth species' viability standards or adequately dealing with forestwide old-growth declines, the project may not be in compliance with the LCAS.</p> <p>Lynx analysis assumes snowshoe hare is primary forage species, but new studies show that lynx may have a more variable diet in its southern range, where MT is located (Roth et al 2007). Therefore viability of lynx cannot be equated simply with current or projected snowshoe hare habitat and analysis of the Cooney McKay project's effect on lynx should not be confined to its effects on snowshoe hare habitat.</p> <p>The impacts of both winter and non-winter motorized route densities must be adequately considered. The LCAS states, "the effects of open road densities on lynx are poorly understood" (LCAS at 95).</p> <p>It is not clear that the Flathead NF has a complete understanding of the current level of use of the project area for snowmobiles and other motorized recreational users. 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 and other motorized recreational users, snowshoers, and cross country skiers long after the logging activities have stopped. These roads/access routes can also impact lynx habitat during all seasons because of increased access for humans.</p> <p>From Ruggiero, et al. (1999: "Lynx metapopulation dynamics operate at regional scales" (p. 24). There must be maps and adequate discussion of the connectivity issue in the EIS, making it possible to see the landscape features that affect connectivity and metapopulation dynamics within and between LAUs both within and outside the project area, a goal of the LCAS mapping requirement.</p>	<p>←36b</p>	<p>described in the previous LCAS and the standards and guidelines outlined in the more recent Northern Rockies Lynx Management Amendment (NRLA). The project is also compatible with recommendations in the Lynx Science Report.</p> <p><b>Response to Comment #36b:</b> The impacts of route or road densities are not included in the Lynx Conservation Assessment Strategy as measures that are likely needed to conserve the species. The LCAS states "Preliminary Information suggests that lynx may not avoid roads, except at high traffic volumes. Therefore, at this time, there is no compelling evidence to recommend management of road density to conserve lynx."(Pages 7-10 in Ruediger, et al. 2000 LCAS).</p> <p>Over the snow routes for the Cooney McKay Project are discussed in the lynx analysis on page 3-167 of the DEIS as well as in the BA. LCAS requirements related to over-the-snow routes, pertains to <u>designated</u> over-the-snow routes and <u>designated</u> play areas. The proposed project would not increase designated routes within the analysis area. The LCAS specifically exempts winter logging activity from restrictions concerning over-snow travel.</p> <p>Map 3-6 in the DEIS shows the two Lynx Analysis Units included in the Cooney McKay Project Area. The FEIS for the Northern Rockies Lynx Management Direction includes maps related to linkage areas. The maps are located at <a href="http://www.fs.fed.us/r1/wildlife/carnivore/">http://www.fs.fed.us/r1/wildlife/carnivore/</a>.</p>

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<p>The very existence of roads and compacted travel routes from motorized vehicles in snow adversely affect lynx because of the advantage provided for other predators that normally wouldn't be in portions of the project area in winter.</p> <p>Any assumption that a project will not adversely impact the lynx simply because LCAS standards and guidelines are met has never been verified. These management guidelines are merely a guess for lynx management, developed by the FS and other government agencies. There has never been an independent scientific peer review of these guidelines, including by lynx experts such as those who prepared the Ruggiero, et al. (1999) research paper upon which the LCAS is largely based.</p> <p>Viability of species is not merely an issue of a given project area. As a matter of science, a larger area must be considered. In their response to comments on the Dry Fork Vegetation and Recreation Restoration Project Environmental Assessment, Lewis &amp; Clark National Forest, 2000, the FS acknowledged that viability is not merely a project area consideration, that the scale of analysis must be broader:</p> <p style="padding-left: 40px;">Population viability analysis is not plausible or logical at the project level such as the scale of the Dry Fork Vegetation and Recreation Restoration EA. Distributions of common wildlife species as well as species at risk encompass much larger areas than typical project areas and in most cases larger than National Forest boundaries. (Appendix D at p. 9.)</p>	<p>←37</p>	<p><b>Response to Comment #37:</b> The FWS and the U.S. Forest Service agreed to use the Lynx Conservation Assessment Strategy (LCAS) and the Science Report in evaluating actions on NFS lands to determine whether the activity may affect the lynx (USFS and USFWS 2000, Canada Lynx Conservation Agreement, page 8). Also in this agreement on page 7, it states that "The Agencies agree that the LCAS includes a set of recommendations that are based on the best currently available scientific information about lynx, risks to the species and/or individuals posed by management activities, current habitat conditions, and measures that are likely needed to conserve the species." The adequacy of the LCAS in maintaining viable populations of lynx is outside the scope of the Cooney McKay EIS.</p>
<p>Ruggiero, et al. 1994 provide guidance for reconciling the disparity between the geographic size of project analyses vs. the needs of species: "The disparity between the scale of a local management action (e.g., a timber sale) and the scale of the ecological response (e.g., species viability) is a fundamental problem in assessing population viability."</p> <p>Both Ruggiero, et al. 1994 and Lindenmayer, et al. 1993 provide discussion on why population viability analysis is the best available tool assessing population viability, the latter providing examples of population viability analysis being used for several species of wildlife and one plant species. Lacy and Clark, 1993 provide an example of population viability analysis used to design a computer simulation of risk of extinction of the pine marten.</p>	<p>←38</p>	<p><b>Response to Comment #38:</b> Please see Responses to Comments #12c, #28a, and #30.</p> <p>"A Conservation Assessment of the Northern Goshawk, Black-backed Woodpecker, Flammulated Owl, and Pileated Woodpecker in the Northern Region," USDA Forest Service" Samson (2006), demonstrates that the Northern Region and the Flathead National Forest provide for the diversity of plant and animal communities for those species listed above.</p> <p>"Habitat estimates for maintaining viable populations of the northern goshawk, black-blacked woodpecker, flammulated owl, pileated woodpecker, American marten and fisher" also cited as Samson (2006) clearly demonstrate that the Northern Region and the Flathead National Forest provide more than enough</p>

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<p>In a scientific document prepared as a part of ICBEMP, Witmer, Martin, &amp; Saylor (1998) make recommendations which reinforce our comments about population dynamics, population viability analysis, and monitoring. From the Abstract:</p> <p>Forest carnivores in the Pacific Northwest include 11 medium- to large-sized mammalian species of canids, felids, mustelids, and ursids. These carnivores have widely differing status in the region, with some harvested in regulated furbearer seasons, some taken for depredations, and some protected because of rarity. Most large carnivores have declined in numbers or range from human encroachment, loss or modification of forest habitat, accidental deaths (e.g., mortality from vehicles), illegal kills, and our inability to adequately monitor and protect populations. Efforts to reverse these trends include new approaches to reduce conflicts with humans, research to better define habitat needs, formation of expert carnivore working groups, and use of Geographic Information System models to predict specific impacts of habitat modifications. <u>Long-term preservation of large carnivores in the region is problematic unless we reduce forest fragmentation and conflicts with humans and improve our ability to quantitatively integrate population dynamics with landscape level habitat requirements.</u> (Emphasis added.)</p> <p>Methodology exists for determining the presence of indicator and Sensitive wildlife species presence in forest areas and/or for monitoring population levels (Bachman et. al. 1990, Becker 1991, Bull et al. 1990; Copeland 1993, Foresman et. al. 1998, Raphael 1994, USGS 1997, Watson et. al. 1999, Weaver, et al., 1997; Zielinski et. al. 1996, Zielinski et. al. 1995). Some of these techniques, such as snow track surveys, are useful for multiple species in single transects.</p> <p>The issue of providing for the larger landscape needs of far-ranging forest carnivores (including the grizzly bear, gray wolf, wolverine, fisher, pine marten, lynx, goshawk, etc.) reveals the need to utilize the principles of Conservation Biology on a landscape level. Core areas of relatively undisturbed habitats need to be maintained. Linkages with other core areas need to be established, providing sufficient habitat components so the linkages, or corridors, are functional for genetic interchange purposes.</p>	<p>←39</p>	<p>habitat to meet the threshold to maintain minimum viable populations of the Management Indicator and Sensitive species analyzed in that report.</p> <p>In addition, Project File Exhibit F-2, “Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities,” addresses the natural history, population, habitat and distribution of wildlife species which can be found on the Flathead National Forest. This document discusses the threats to the different species, conservation measures in place to address those threats, and an evaluation of the species at the Forest and Regional level. These documents provide a larger picture of species’ habitat and occurrence found forest-wide.</p> <p><b>Response to Comment #39:</b> The wildlife analysis documented in the DEIS is a habitat-based analysis supported by scientific literature and the professional judgment of the District Wildlife Biologist. The DEIS (pages 3-161 through 3-248) and the BA indicate that the project would maintain adequate habitat within the analysis area. The BE is included in the DEIS on pages 3-194 through 3-223.</p>

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<p>Both core areas and linkages should be the focus of the watershed rehabilitation and recovery discussed above (such as road removal). Buffer zones around core areas should also be recognized in their contribution to habitat needs for these wildlife species.</p> <p>State-of-the-art conservation biology and the principles that underlie the agency’s policy of “ecosystem management” dictate an increasing focus on the landscape-scale concept and design of large biological reserves accompanied by buffer zones and habitat connectors as the most effective (and perhaps only) way to preserve wildlife diversity and viability (Noss, 1993).</p> <p>The continued fragmentation of the Flathead NF is a major ongoing concern. It is documented that edge effects occur 10-30 meters into a forest tract (Wilcove et al., 1986). The size of blocks of interior mature and old-growth forest that existed historically before management (including fire suppression) was initiated must be compared to the present condition. Again, this should be a landscape ecology analysis that looks at the larger picture of the fragmentation of habitat in surrounding concentric circles.</p> <p>The FS has still not sufficiently dealt with the issue of fragmentation, road effects, and past logging on old-growth species’ habitat. The EIS must disclose the degree to which edge effects on old growth species’ habitat exist, and how much total edge effect would be increased, by the alternatives. Cumulative effects on old-growth habitat and on old-growth associated species include increased fragmentation, reduced older forest patch sizes, increased high-contrast edge, reduced availability of interior habitat, and decreased forested connectivity. Such effects would reduce the ability to provide for the habitat needs of old-growth associated species for decades to come following implementation of the project and other activities in the project area.</p> <p>Mills (1994) points out the necessity of considering habitat fragmentation and current landscape pattern, caused by past logging and road building, for wildlife movements and therefore viability. Mills points out that the FS’s use of the term “viable” refers to <u>habitat characteristics</u>, not <u>population dynamics</u>. Mills goes on to explain the range of parameters that must be used to make a scientifically sound assessment of the viability of wildlife species. Population dynamics refers to persistence of a population over time—which is key to making predictions about population viability. Population dynamics include assessing population size, population growth</p>	<p>←40</p>	<p>The analysis of wildlife species discuss the existing habitat conditions within the analysis area and the effects the proposed action would have on their habitat. The assumption made in conducting analysis at this level, is that by insuring that there is sufficient, well-distributed habitat in each analysis area, we will insure that species have sufficient, well-distributed habitat across their range.</p> <p><b>Response to Comment #40:</b> The analysis for wildlife species includes discussion of habitat characteristics, habitat availability and condition in the project area, and population health at several levels, including project level, valley wide, and regional (DEIS, pages 3-161 through 3-179).</p> <p>Determinations were made for T&amp;E species and the FWS concurred with the determinations. Habitat conditions for old growth associated species and snag dependent species in the analysis area were analyzed and discussed in the DEIS (3-179 through 3-194 and 3-223 through 3-229). The Cooney McKay Project is consistent with the NFMA and with Forest Plan Amendment 21. The analysis of sensitive species included a discussion of existing habitat and habitat conditions for the different species, which may be found within the project area (DEIS 3-194 through 3-223). Determinations were made on whether significant impacts would occur. The wildlife analysis also included discussion of Forest Management Indicator Species and migratory birds (DEIS 3-230 through 3-248). After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed actions.</p> <p>As discussed in Responses to Comments #11 and 12 in Letter C-68, we do not believe the proposed treatments eliminate habitat connections. Most of the treatments retain significant amounts of vegetation that will continue to provide potential corridors for wildlife traveling between various habitats. The Vegetative Cover Maps for Alternative 3 – Modified (Maps 4A and 4B) in the ROD display the existing vegetative cover across the landscape, on both NFS lands, private ownership, and other private corporate lands (PCTC). The NAIP imagery allows a visual display of the vegetative cover that currently exists on the landscape. The outlines overlaid on the imagery show where</p>

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<p>rate, and linkages to other populations and must be included in a scientifically sound Population Viability Analysis (hereafter “PVA”). Ruggiero, et. al. (1994) also point out that a sound PVA must utilize measures of population dynamics. Considering potential difficulties of using population viability analysis at the project analysis area level (Ruggiero, et. al., 1994), the cumulative effects of carrying out multiple projects simultaneously across the Flathead NF makes it imperative that population viability be assessed at least at the forestwide scale (Marcot and Murphy, 1992). Also, <u>temporal</u> considerations of the impacts on wildlife population viability from implementing something with such long duration as a Forest Plan must be considered (id.) but this has never been done by the Flathead NF. It is also of paramount importance to monitor population trends (as mandated by the Forest Plan) during the implementation of the Forest Plan in order to validate assumptions used about long-term species persistence i.e., population viability (Marcot and Murphy, 1992; Lacy and Clark, 1993). Finally, the 1999 draft NFMA planning regulations also recognize the importance of consideration of population dynamics for sustaining species.</p> <p>USDA Forest Service (2004a) states:</p> <p style="padding-left: 40px;">Forested connections between old growth patches ... (widths) are important because effective corridors should be wide enough to “contain a band of habitat unscathed by edge effects” relevant to species that rarely venture out of their preferred habitats (Lidicker and Koenig 1996 and Exhibit Q-17). (Page 3-201.)</p> <p style="padding-left: 40px;">Timber harvest patterns across the Interior Columbia River basin of eastern Washington and Oregon, Idaho, and western Montana have caused an increase in fragmentation of forested lands and a loss of connectivity within and between blocks of habitat. This has isolated some wildlife habitats and reduced the ability of some wildlife populations to move across the landscape, resulting in long-term loss of genetic interchange (Lesica 1996, U.S. Forest Service and Bureau of Land Management 1996 and 1997). (Page 3-216.)</p> <p>USDA Forest Service (2004a) further discusses the fragmentation effects on old-growth habitat, effects that could be exacerbated by the proposed project:</p> <p style="padding-left: 40px;">Harvest or burning in stands immediately adjacent to old growth</p>	<p style="text-align: center;">←41a</p>	<p>old growth stands are located on the landscape, where intermediate harvest is proposed, and where seed tree harvest is proposed. Only the seed tree harvest units would create openings that would not provide hiding cover for wildlife. The old growth stands would remain untreated under Alternative 3 - Modified, and the intermediate harvest units would still retain over 50 percent canopy cover following treatment. These maps were created to visually demonstrate that the amount of vegetative cover on the landscape would not change significantly from the existing condition with implementation of Alternative 3 - Modified.</p> <p><b>Response to Comment #41a:</b> Old growth analysis is contained in the FEIS for the Flathead National Forest Plan Amendment 21, and in the DEIS for this project.</p>



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<p>(Pages 3-196 to 3-197.)</p> <p>Harrison and Voller, 1998 state, “connectivity should be maintained at the landscape level.” They adopt a definition of landscape connectivity as “the degree to which the landscape facilitates or impedes movement among resource patches.” Also:</p> <p style="padding-left: 40px;">Connectivity objectives should be set for each landscape unit. ...Connectivity objectives need to account for all habitat disturbances within the landscape unit. The objectives must consider the duration and extent to which different disturbances will alienate habitats. ... In all cases, the objectives must acknowledge that the mechanisms used to maintain connectivity will be required for decades or centuries.</p> <p>(Id., internal citations omitted.) Harrison and Voller, 1998 further discuss these mechanisms:</p> <p style="padding-left: 40px;">Linkages are mechanisms by which the principles of connectivity can be achieved. Although the definitions of linkages vary, all imply that there are connections or movement among habitat patches. Corridor is another term commonly used to refer to a tool for maintaining connectivity. ...the successful functioning of a corridor or linkage should be judged in terms of the connectivity among subpopulations and the maintenance of potential metapopulation processes. (Internal citations omitted.)</p> <p>Harris, 1984 discusses connectivity and effective interior habitat of old-growth patches:</p> <p style="padding-left: 40px;">Three factors that determine the effective size of an old-growth habitat island are (1) actual size; (2) distance from a similar old-growth island; and (3) degree of habitat difference of the intervening matrix. ... (1) In order to achieve the same effective island size a stand of old-growth habitat that is surrounded by clearcut and regeneration stands should be perhaps ten times as large as an old-growth habitat island surrounded by a buffer zone of mature timber.</p> <p>Harris, 1984 discusses habitat effectiveness of fragmented old growth:</p>	<p>←41d</p>	<p><b>Response to Comment #41d:</b> As discussed in Responses to Comments above, we do not believe the proposed treatments eliminate habitat connections. Most of the treatments retain significant amounts of vegetation and will continue to serve as potential corridors for wildlife traveling between various habitats. Maps 4A and 4B included in the ROD display the situation.</p>

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<p>(A) 200-acre (80 ha) circular old-growth stand would consist of nearly 75% buffer area and only 25% equilibrium area. ...A circular stand would need to be about 7,000 acres (2,850 ha) in order to reduce the 600-foot buffer strip to 10% of the total area. It is important to note, however, that the surrounding buffer stand does not have to be old growth, but only tall enough and dense enough to prevent wind and light from entering below the canopy of the old-growth stand.</p> <p>Harris, 1984 believes that “biotic diversity will be maintained on public forest lands only if conservation planning is integrated with development planning; and site-specific protection areas must be designed so they function as an integrated landscape system.” Also:</p> <p>Because of our lack of knowledge about intricate old-growth ecosystem relations (see Franklin et al. 1981), and the notion that oceanic island never achieve the same level of richness as continental shelf islands, a major commitment must be made to set aside representative old-growth ecosystems. This is further justified because of the lack of sufficient acreage in the 100- to 200-year age class to serve as replacement islands in the immediate future. ... (A) way to moderate both the demands for and the stresses placed upon the old-growth ecosystem, and to enhance each island’s effective area is to surround each with a long-rotation management area.</p> <p>The EIS must analyze and disclose these fragmentation effects on old-growth species’ viability, caused by the current conditions and by the proposed project.</p>	<p>←41e</p>	<p><b>Response to Comment #41e:</b> As discussed above, habitat conditions for old growth associated species and snag dependent species in the analysis area were analyzed and discussed in the DEIS (3-179 through 3-194 and 3-223 through 3-229). The Cooney McKay Project is consistent with the NFMA and with Forest Plan Amendment 21. The analysis of sensitive species included a discussion of existing habitat and habitat conditions for the different species which may be found within the project area (DEIS, pages 3-194 through 3-223). Determinations were made on whether significant impacts would occur. The wildlife analysis also included discussion of Forest Management Indicator Species and migratory birds (DEIS 3-230 through 3-248). After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed</p>

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<p>Logging, roadbuilding and other disturbance associated with the project and other cumulative impacts could affect goshawk nesting, post-fledging family habitat, alternative nesting, foraging, competitors, prey and potential habitat, including areas far from cutting units. Research in the Kaibab National Forest found that goshawk populations decreased dramatically after partial logging, even when large buffers around nests were provided (Crocker-Bedford, 1990).</p>	<p>←42a</p>	<p>actions.</p> <p>As discussed above, the proposed treatments are not expected to eliminate habitat connections. Most of the treatments retain significant amounts of vegetation and will continue to serve as potential corridors for wildlife traveling between various habitats. Maps 4A and 4B included in the ROD display the situation.</p> <p><b>Response to Comment #42a:</b> Please see the DEIS on pages 3-211 through 3-216 for the goshawk analysis. The analysis used parameters outlined in the Northern Goshawk Northern Region Overview – Key Findings and Project Considerations (May 2007). Goshawk habitat was summarized for individual sub-basins; in the 469,280-acre Swan Valley sub-basin, approximately 203,972 acres of suitable habitat were identified. The recent Meadow Smith Analysis (USDA 2003) described 5 potential goshawk territories on the east side of the Swan Valley (east of the Swan River), from the Swan River State Forest on the northern end to Rumble Creek in the south. This description assumed no overlap in home ranges, an average goshawk home range size of 6,000 acres, and even distribution across the landscape.</p> <p>The analysis for northern goshawk in the Cooney McKay Project area also looked at these potential goshawk territory blocks. Private lands, both corporate and individual, were included as foraging habitat. However, due to the uncertainty of conditions on private lands, potential nesting and post-fledging habitat were only identified on NFS lands. The forest stands within the potential territory blocks were identified as potentially providing nesting, post-fledging, or forage habitat. Each territory block has several different “patches” that represent a potential nesting and post-fledging area (PFA). Nesting habitat consists of mature forest stands with larger trees that have closed canopies (&gt;60 percent) and make up a contiguous block of at least 40 acres. Post-fledging areas include forest stands with greater than 50 percent canopy cover. A broad range of habitats were considered as potential foraging areas. Of the five previously identified territory blocks, three are located within the Cooney McKay Project area. Additional patches of nesting and post-fledging habitat were included in the two southern blocks in order to overlap the Cooney McKay Project Area.</p> <p>The analysis for old growth associated wildlife species indicates that the project area is currently meeting the needs of old growth associated species. The analysis acknowledges that the mature forest patch sizes have</p>

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<p>Reynolds, et al. 1992, provide a basis for a northern goshawk conservation strategy that could be implemented if forestwide habitat considerations were to be truly taken into account. It is essential to viability of goshawks that 20-50% of old growth within their nesting areas be maintained (Ibid.). (See also Suring et al. 1993.)</p> <p>Graham, et al. 1999, USDA Forest Service 2000b, Iverson et al. 1996, and Suring et al. 1993 are more examples of northern goshawk conservation strategies the FS might adopt for this Forest or Region, if emphasis was more appropriately placed on species conservation and insuring viability rather than justification for resource extraction.</p>	<p>←42b</p>	<p>decreased over time and are more fragmented; however, the analysis goes on to demonstrate that the effects from the proposed project would not be significant. The DEIS explains that, under every alternative, adequate potential territory blocks, and adequate amounts of nesting and PFA habitat, would be provided to support a northern goshawk population in the Swan Valley. For the northern goshawk, the analysis indicates that the proposed treatments may impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or loss of viability to the population or species.</p> <p>In the spring and summer of 2005, the Forest Service's Region One conducted field surveys of goshawks across the accessible portions of the Region (Kowalski). The results of the 1 year estimate suggest that during the nesting period goshawks were fairly common and well distributed in the roaded portions of NFS lands in Region One (Kowalski 2006). No demographic information exists to suggest a decline in goshawk numbers (FWS 1998, Anderson et al. 2004, Squires and Kennedy 2006).</p> <p>Management Requirements and Design Criteria for the ROD (Appendix 2) state to cease activity or otherwise protect populations and individuals of threatened, endangered, or sensitive species. If nests are found prior to the sale selling, we would address the issue contractually.</p> <p><b>Response to Comments #42b:</b> A Conservation Assessment of the Northern Goshawk for the Northern Region, has been completed (Samson, 2005 (amended March 6, 2006). The conservation assessment for the goshawk consists of: 1) a brief overview of ecology, behavior, and habitat use; 2) a brief overview of the habitat use in the Northern Region; 3) estimate of well-distributed habitat and habitat amount by National Forest; 4) evaluation of short-term (today's landscape) viability; and 5) evaluation of long-term viability (historic landscape) and ecosystem sustainability.</p> <p>Based on this region-wide conservation assessment, habitat for the goshawk is abundant and well-distributed in the Northern Region (Samson, 2005</p>



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<p>Reynolds et al. (1992) strongly recommend that 60% of the postfledging area be comprised of suitable foraging habitat with relatively dense canopies from mid- to old age forests.</p> <p>There must be protection of the 5400 acre goshawk foraging areas for the known active territories. The impact of logging on goshawk foraging habitat is well-detailed in the scientific literature. Problems with forest thinning have been noted by several goshawk experts (USDA Forest Service 2000b), including Dr. Richard Reynolds, the lead author of the southwest goshawk guidelines. Regeneration cuts will also impact goshawk foraging, because younger stands of forest have been identified as poor goshawk foraging habitat (Patla 1997). This is why the Reynolds et al. (1992) guidelines requires a threshold level (60%) of older, more dense forests with large snags in goshawk foraging habitat.</p> <p>Greenwald et al., 2005 reviewed the current literature on goshawk habitat relationships applicable to the northern Rockies, especially focusing on logging's impacts. Nine of 12 studies demonstrated selection for stands with higher canopy closure, larger tree size, and greater numbers of large trees than found in random stands. Some notable statements and conclusions include:</p> <p>...Most studies found that goshawks avoided open areas and logged early-seral stands; none of the studies cited in this paper found selection for such features.</p> <p>...While some studies suffered from small sample sizes or relatively short sampling periods, the consistency of results demonstrates goshawk selection for late-successional forest structures (e.g., high canopy closure, large trees for forest type, canopy layering, abundant coarse woody debris) when using areas within their studied home ranges. ... This is not to say that goshawks only forage or roost in mature stands, but rather that such stands are disproportionately selected.</p> <p>... (R)eviewed studies found goshawks avoided open areas, particularly logged open areas, and none found selection for openings.</p>	<p>←44</p>	<p><b>Response to Comment #44:</b> The actual results of Greenwald's review were that "Selection for natural openings, edges, and stand diversity was <b>inconclusive</b>" (emphasis added). He also points out that selected canopy closure range from 34 to 80 percent. The studies on productivity cited in Greenwald (Crocker-Bedford 1995) point out that even with up to 39 percent of the home range selectively harvested, occupancy rate was still very high (83 percent) and contrasting research (McClaren et al. 2002) that shows no significant variation across 3 study area, suggesting that habitat is not an important determinant of reproductive success. See also Response to Comment #42b.</p>

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<p>... The 5 studies correlating nest occupancy and productivity with habitat features consistently demonstrated a relationship between closed-canopied forests with large trees and goshawk occupancy. Occupancy rates were reduced by removing forest cover in the home range, which thereby resulted in reduced productivity because there were fewer active breeding territories. (Internal citations omitted.)</p> <p>Seeking to promote abundant populations of 14 prey species, Reynolds et al. (1992) recommend maintaining 20% of the landscape in grass-forb or seedling-sapling stage forest, 20% in young forest, 20% in mid-aged forest, and 40% in mature and old forests. ... Given the above findings that goshawks generally avoid open areas and early-seral forest, that logging reduces goshawk occupancy and productivity, and a lack of evidence that creating openings or young forest through logging benefits goshawks, these recommendations appear to lack support in research produced since 1992.</p> <p>Across most of the western United States, mature and old-forests have declined to much less than 40% of the landscape. Given these declines and the lack of information on the amounts of mature and old-forest goshawks require, we recommend protecting existing mature and old-forest characteristics and ensuring that such forests are allowed to develop in proportions similar to presettlement conditions. This can be accomplished by restricting cutting to small trees, and prohibiting large reductions in canopy closure. A similar proposal was recently adopted by Region 5 of the United States Forest Service for the Sierra Nevada. In sum, based on apparent inconsistencies between subsequent research and Reynolds et al. (1992), we recommend adaptation of the management guidelines to incorporate results of numerous studies conducted since 1992. (Internal citations omitted.)</p> <p>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.</p>	<p>←44a</p>	<p><b>Response to Comment #44a:</b> As discussed in Response to Comment #42a, the wildlife analysis documented in the EIS is a habitat-based analysis supported by scientific literature and professional judgment of the District Wildlife Biologist. The goshawk analysis in the DEIS (pages 3-211 through 3-216) indicate the project would maintain adequate habitat within the analysis area.</p>



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<p>other aspects of fisher life cycles and fisher survival could be impacted by the project.</p> <p>Jones (undated) and Johnsen, 1996) provides examples of beginning developments of conservation strategies for the fisher, something the FS has so far neglected for this Sensitive species.</p> <p>Lofroth (1997) in a study in British Columbia, found that wolverines use habitats as diverse as tundra and old-growth forest. Wolverines are also known to use mid- to low-elevation Douglas-fir forests in the winter (USDA Forest Service, 1993).</p> <p>The Flathead NF provides inadequate management strategies to insure viability of the pine marten. Ruggerio, et al. (1998) and Bull and Blumton, 1999, indicate that vertical and horizontal diversity provided by snags and large down woody debris are important habitat characteristics for the pine marten, another old-growth wildlife species. The treatments proposed for this project would reduce the availability of prey species for the marten.</p> <p>Old growth allows martens to avoid predators, provides resting and denning places in coarse woody debris and large diameter trees, and allows for access under the snow surface. USDA Forest Service, 1990 is summary of old-growth habitat needs of martens reviewed research suggesting that martens prefer forest stands with greater than 40% tree canopy closure and rarely venture more than 150 feet from forest cover, particularly in winter. It also cites research suggesting that at least 50% of female marten home range should be maintained in mature or old growth forest. Also, consideration of habitat connectivity is essential to ensuring marten viability: "To ensure that a viable population of marten is maintained across its range, suitable habitat for individual martens should be distributed geographically in a manner that allows interchange of individuals between habitat patches (Ibid.).</p> <p>The FS has otherwise recognized the need for updated guidelines for the</p>	<p>←47</p> <p>←48</p> <p>←49</p> <p>←50</p>	<p><b>Response to Comment #47:</b> Please see the DEIS on pages 3-201 through 3-206 for the fisher analysis. The analysis incorporated the fisher habitat assessment of the Swan Valley (USDA 1994). The document "Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities" was also incorporated into the analysis; it describes how fisher habitat is thought to occur at historically normal levels at both the Flathead National Forest and Region One scales (p.22). Samson (2006) also described how potential fisher habitat is plentiful throughout Region 1.</p> <p><b>Response to Comment #48:</b> Please refer to the DEIS on pages 3-220 through 3-223 for the analysis of wolverine habitat within the Cooney McKay Analysis Area. On these pages, it explains how wolverine habitat was defined on a Regional and forest-wide basis.</p> <p><b>Response to Comment #49:</b> American marten are often associated with old growth habitat. The DEIS discusses the conditions and effects of Old Growth associated wildlife species on pages 3-179 through 3-194. Snag and coarse woody debris requirements in the Design Criteria will be implemented with the ROD (Appendix 2).</p> <p><b>Response to Comment #50:</b> Currently, the marten is not designated as a sensitive species or a management indicator species for the Flathead National Forest. Direction provided by the Flathead Forest Plan for old growth would provide for suitable habitat for old growth associated species such as the marten. As identified in the DEIS on pages 3-179 through 3-194, there is approximately 10 to 14 percent of the Cooney McKay Area in old growth forest. The acres of old growth forest are represented in 37 patches ranging in size from 10 to 305 acres. The average patch size (uninterrupted continuity) is 87 acres. Proposed treatments would not eliminate habitat connections. Most of the treatments retain significant amounts of vegetation and will continue to serve as potential corridors for wildlife traveling between various habitats.</p> <p>On pages 3-223 through 3-230 the DEIS discloses existing snag and down woody conditions (respectively) and the effects of proposed activities on snag and down woody habitat. As identified on page 3-225, the DEIS analyzes</p>



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<p>services such as stabilising forests and storing carbon.</p> <p>Despite its enormous importance, deadwood is now at a critically low level in many European countries, mainly due to inappropriate management practices in commercial forests and even in protected areas. Average forests in Europe have less than 5 per cent of the deadwood expected in natural conditions. The removal of decaying timber from the forest is one of the main threats to the survival of nearly a third of forest dwelling species and is directly connected to the long red list of endangered species. Increasing the amounts of deadwood in managed forests and allowing natural dynamics in forest protected areas would be major contributions in sustaining Europe's biodiversity.</p> <p>For generations, people have looked on deadwood as something to be removed from forests, either to use as fuel, or simply as a necessary part of "correct" forest management. Dead trees are supposed to harbour disease and even veteran trees are often regarded as a sign that a forest is being poorly managed. Breaking up these myths will be essential to preserve healthy forest ecosystems and the environmental services they provide.</p> <p>In international and European political processes, deadwood is increasingly being accepted as a key indicator of naturalness in forest ecosystems. Governments which have recognised the need to preserve the range of forest values and are committed to these processes can help reverse the current decline in forest biodiversity. This can be done by including deadwood in national biodiversity and forest strategies, monitoring deadwood, removing perverse subsidies that pay for its undifferentiated removal, introducing supportive legislation and raising awareness.</p> <p>Please disclose how many old logging units in the project area are deficient in snags, another vital and necessary component of old-growth habitat.</p> <p>Bull, et al., 1997 state: This document presents new information on the retention and</p>	<p>←53</p>	<p>will be left further than 150 feet from open roads and private land boundaries, and well distributed.</p> <p>To maintain appropriate coarse woody material amounts in treatment units to meet Forest Plan management guidelines, as modified for fuel reduction areas within the WUI, where available, 15 pieces average per acre 9 to 20 inches diameter and 10 pieces average per acre greater than 20 inches diameter will be left. This amount of down woody material equates to 5 to 10 tons per acre. Generally, down woody material to be left will be further than 150 feet from private land boundaries (DEIS, Table 2-14).</p> <p>The DEIS also states "When the emphasis on managing old growth forests (USDA 1999) is considered, and the large number, acreage, and distribution of recent fires on the Flathead National Forest in 1988, 1994, 2000, 2001, 2003, 2006, and 2007 that recruited large numbers of snags, it can be concluded that at the Flathead National Forest scale, snag habitat is being both recruited and retained. At the Flathead National Forest scale, fires within the last 6 years within stands greater than 9 inches (trees large enough to provide a potentially suitable snag) occurred at 125.5 percent of the average historic conditions (Hillis, Pengeroth, and Leadn 2003)."</p> <p>The ICBEMP DSEIS data is broad, general information (ecoregion scale). The DSEIS recognized this and states in Appendix 12 "...that these broad standards may require fine tuning for more ecological conditions." The information used in the Cooney McKay DEIS is and is a fine tuning of the ICBEMP information.</p> <p><b>Response to Comment #53:</b> Please see the Response to Comment #52 above.</p>

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<p>selection of trees and logs most valuable to wildlife.</p> <p>...Current direction for providing wildlife habitat on public forest lands does not reflect this new information. Since the publication of Thomas and others (1979), new research suggests that to fully meet the needs of wildlife, additional snags and habitat are required for foraging, denning, nesting, and roosting. Although we do not suggest specific numbers or snags to retain by forest type, tow recent studies indicate that viable woodpecker populations occurred in areas with about four snags per acre.</p> <p>We suggest that the next step in snag management should involve creating a model that incorporates the new information on woodpecker foraging substrates (live trees, snags, and logs), home range sizes, number and characteristics of roost trees, multiple occupancy of snags, and needs for other habitat structures. Once this information is incorporated, the model may suggest changes to guidelines that specify numbers of snags and other habitat features by forest type and geographic area. Additional information on fall rates of snags, foraging needs of black-backed and three-toed woodpeckers, relation of the density of woodpeckers to that of secondary cavity nesters, and relation of snag density to woodpecker density would greatly improve the model.</p> <p>The IPNF (USDA Forest Service, 2000c) has also recently called for updated snag guidelines: “Apply snag and down woody material guidelines from the Upper Columbia River Basin Assessment to improve marten habitat” (p. 39). Although that report doesn’t state what those guidelines should be, we welcome the FS’s acknowledgment of scientific evidence that reveals their guidelines inadequate.</p> <p>The EIS must consider that snags may be cut down for safety reasons during logging operations (due to OSHA regulations). The EIS must disclose <u>the amount of</u> snag loss expected because of safety concerns and also skyline corridors and other methods of log removal—the loss could be more significant that disclosed. A paucity of snag habitat in previously logged areas can be at least partially attributed to concerns over logger</p>	<p>← 54</p>	<p><b>Response to Comment #54:</b> Please read Appendix 2 of the ROD which displays Management Requirements and Design Criteria to maintain snags within the Cooney McKay Project area. The Cooney McKay Project will not contribute significantly to negative cumulative effects on snag or down woody habitats, or associated wildlife species, in the Swan Valley. Existing old growth forest habitat and riparian habitat, both within and outside of the project area, would continue to provide important dead tree habitat for a large</p>

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<p>safety.</p> <p>The degree to which pileated woodpeckers prefer larger trees/snags for nesting must be recognized. Also, USDA Forest Service, 1990 states, “To provide suitable pileated woodpecker habitat, strips should be at least 300 feet in width...”</p> <p>USDA Forest Service, 1990 indicates that measurements of the following variables are necessary to determine quality and suitability of pileated woodpecker habitat:</p> <ul style="list-style-type: none"> <li>• Canopy cover in nesting stands</li> <li>• <b>Canopy cover in feeding stands</b></li> <li>• Number of potential nesting trees &gt;20” dbh per acre</li> <li>• Number of potential nesting trees &gt;30” dbh per acre</li> <li>• Average DBH of potential nest trees larger than 20” dbh</li> <li>• Number of potential feeding sites per acre</li> <li>• Average diameter of potential feeding sites</li> </ul> <p>The preferred very large diameter of nesting trees for the pileated woodpecker recognized by USDA Forest Service, 1990 is notable. McClelland and McClelland, 1999 found similar results in their study in northwest Montana, with the average nest tree being 73 cm. (almost 29”) dbh.</p> <p>The FS has stated: “Well distributed habitat is the amount and location of required habitat which assure that individuals from demes, distributed throughout the population’s existing range, can interact. Habitat should be located so that genetic exchange among all demes is possible.” (Mealey, 1983.) This cited document also provides guidance as to how habitat for the pileated woodpecker must be distributed for populations to persist.</p> <p>The IPNF’s Forest Plan provides an example of better management directives for the pileated woodpecker than the Flathead NF recognizes. IPNF’s Forest Plan Wildlife Standard #10f requires “One or more old-growth stands per old-growth unit should be 300 acres or larger. Preference should be given to a contiguous stand; however, the stand may be subdivided into stands of 100 acres or larger if stands are within one mile. The remaining old-growth management stands should be at least 25 acres in size. Preferred size is 80 plus acres.” IPNF Forest Plan at II-29. This and other IPNF old growth Standards are based upon what the IPNF</p>	<p>←55</p>	<p>suite of wildlife species.</p> <p><b>Response to Comment #55:</b> Habitat conditions for old growth associated species and snag dependent species in the analysis area were analyzed and discussed in the DEIS (pages 3-179 through 3-194 and 3-223 through 3-229). Also discussed in the DEIS on page 3-225 in the Snag and Down Woody Dependent Species Section, the Region One Assessment of snag habitat and snag-dependent species completed by Hillis, Pengroth, and Leach (2003) was designed to address the habitat needs of the pileated woodpecker. The DEIS goes on to state that the pileated woodpecker’s needs exceed those of other cavity nesters, with very few exceptions. Hillis, Pengeroth, and Leach (2003) concluded that the distribution of mature/old forest that provides nesting habitat for pileated woodpeckers has not changed substantially since pre-fire suppression /pre-logging periods.</p> <p>Direction provided by the Flathead Forest Plan for old growth would provide for suitable habitat for old growth associated species such as the pileated woodpecker. As identified in the DEIS on pages 3-179 through 3-194, there is approximately 10 to 14 percent of the Cooney McKay area in old growth forest. The acres of old growth forest are represented in 37 patches ranging in size from 10 to 305 acres. The average patch size (uninterrupted continuity) is 87 acres. Proposed treatments would not eliminate habitat connections. Most of the treatments retain significant amounts of vegetation and will continue to serve as potential corridors for wildlife traveling between various habitats. After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed actions. The Cooney McKay Project is consistent with the NFMA and with Forest Plan Amendment 21.</p> <p>For more information regarding old growth on the Flathead National Forest, refer to the Final Environmental Impact Statement, Amendment 21 (USDA 1999).</p>



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<p>Continuing unexplained is why the FS has not taken the steps necessary to insure viability, like follow NFMA and original Forest Plan monitoring requirements by performing population surveys, or like follow its own directives and design <b>conservation strategies</b> for Sensitive species:</p> <p>The companion approach to the coarse filter is the “fine filter” analysis in which <u>conservation strategies are used for individual species or groups of species to contribute to population viability</u>. The fine filter approach narrows the focus to those species that require habitat that may be outside the historic range of variation (HRV). (Kootenai NF’s AMS Technical Report p. 49, emphasis added.)</p> <p>According to official FS policy, the FS “must develop conservation strategies for those sensitive species whose continued existence may be negatively affected by the forest plan or a proposed project.” FSM 2670.45. According to FS experts, population viability analysis is not plausible or logical, from a scientific standpoint, at the project level such as the scale of a timber sale(s), absent some tiering to a larger-scaled study. Distributions of common wildlife species as well as species at risk encompass much larger areas than typical project areas (often referred to as “landscape scales”). 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.</p> <p>An example of a regional multi-species conservation strategy came about in the 1990s when in Region 6, the eastside forest plans were amended in 1994 with the “eastside screens” and the Interior Columbia Basin Ecosystem Management Project (ICBEMP) found that large old trees were below historic levels across the Columbia Basin and should be protected. The “eastside screens” Amendments were in response to scientific information that the forest plans were inadequate to assure population viability of old-growth species and other wildlife. These “eastside screens” limited logging to trees less than 21” diameter at breast height (dbh), except in rare circumstances.</p>	<p>←58</p>	<p><b>Response to Comment #58:</b> Existing conditions and reasonably foreseeable activities, and proposed activities on wildlife are discussed on pages 3-194 through 3-230 of the DEIS. The wildlife analysis documented in the EIS is a habitat-based analysis supported by scientific literature and the professional judgment of the District Wildlife Biologists. The DEIS and the BE (sensitive species analyses) indicate the project would maintain adequate habitat within the analysis area.</p> <p>Samson (2006) describes below how compliance with NFMA is demonstrated: <i>The Forest Service is required by the National Forest Management Act (NFMA) to “provide for the diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” 16 U.S.C. 1604(g)(3)(B).</i> “A Conservation Assessment of the Northern Goshawk, Black-backed Woodpecker, Flammulated Owl, and Pileated Woodpecker in the Northern Region, USDA Forest Service” Samson (2006), demonstrate that the Northern Region and the Flathead National Forest provide for the diversity of plant and animal communities for those species listed above. “Habitat estimates for maintaining viable populations of the northern goshawk, black-backed woodpecker, flammulated owl, pileated woodpecker, American marten and fisher” also cited as Samson (2006) clearly demonstrate that the Northern Region and the Flathead National Forest provide more than enough habitat to meet the threshold to maintain minimum viable populations of the MIS and Sensitive species analyzed in that report.</p> <p>In addition Project File Exhibit F-2, “Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities,” addresses the natural history, population, habitat and distribution of wildlife species which can be found on the Flathead National Forest. This document discusses the threats to the different species, conservation measures in place to address those threats, and an evaluation of the species at the Forest and Regional level. These documents provide a larger picture of species’ habitat and occurrence found forest-wide.</p> <p>Compliance with Forest Plan Old Growth standards is discussed in the Old Growth Section of the DEIS, pages 3-179 through 3-194. The DEIS discloses that old growth forest habitat comprises approximately 10 to 14 percent of the Cooney McKay Project area, depending on whether PCTC lands and other private lands are included in the base acreage.</p>

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<p>The FS has admitted that the use of database habitat information, as the FS often relies upon for project analyses, is suspect: "Habitat modeling based on the timber stand database has its limitations: the data are, on average, 15 years old; canopy closure estimates are inaccurate; and data do not exist for the abundance or distribution of snags or down woody material..." (U.S. Forest Service, 2000c). How similar in quality is the Flathead NF's database information? What wildlife analysis or modeling to be used relies on the database? On average, how old is the Flathead NF's database information? Please disclose if the Flathead NF's database information is such that it is similarly low in reliability for wildlife analysis utilization, as is the IPNF's.</p>	←59	<p><b>Response to Comment #59:</b> TSMRS information used for the Cooney McKay DEIS habitat reports was collected during inventories completed from 1981 through 2007. Database information was also validated by on the ground review by the project Silviculturist, District Wildlife Biologist and other ID Team members. This inventory met the required stand exam and measurement standards at a confidence level ensuring the data's reliability, uniformity, and data integrity. We cannot address the reliability or type of data collected on the IPNF.</p>
<p>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 Flathead NF as a whole. Distribution, status and population trends have yet to be determined. FSM 2670.45. Viability cannot be assured without first establishing population objectives. FSM 2670.22(3) and 2672.1 and 32. These objectives have not been established. 36 CFR 219.12(d), 219.27(a)(5&amp;6).</p>	←60	<p><b>Response to Comment #60:</b> The DEIS (pages 3-194 through 3-230) sections on sensitive wildlife species indicate that the project would maintain adequate habitat within the analysis area.</p> <p>The analysis of wildlife species discuss the existing habitat conditions within the analysis area and the effects the proposed action would have on their habitat. The assumption made in conducting analysis at this level, is that by insuring that there is sufficient, well-distributed habitat in each analysis area, we will insure that species have sufficient, well-distributed habitat across their range.</p>
<p>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.</p>	←61	<p><b>Response to Comment #61:</b> Cumulative effects analysis was conducted throughout Chapter 3 of the DEIS for each resource areas. Tables 3-1 and 3-2 disclose the past, present and reasonably foreseeable future actions that were included in the analysis. Cumulative Effects Worksheets by resource area are included in the project file.</p>
<p>The DEIS says that there are thousands of small isolated wetlands in the Logging project area. DEIS 3-67. How is it that the FS can make such a broad over-generalization that south and west facing aspects are warm dry habitats supporting P. Pine? Is the FS trying to say that none of the thousands of wetlands are located in any of the south or west facing aspects?</p> <p>Aren't the pothole ponds that provide habitat to <i>Howellia Aquatilus</i> evidence that the area hasn't traditionally been one of numerous large openings, except when humans hacked out those openings? The FS</p>	←62	<p><b>Response to Comment #62:</b> The majority of the wetlands are within the valley bottom, although there are scattered wetlands on the hillsides. The reference is a general discussion of the major vegetation characteristics.</p> <p>The ponds are generally within and under the forest canopy, with interspersed small meadow-like openings.</p> <p>The DEIS, pages 3-65 through 3-82 discloses the effects to this plant, as well as other species. Specific Design Criteria have been incorporated into the</p>

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<p>hasn't taken a close look at the effects of logging on H. Aquatilus or its habitat. There are only 217 known occurrences of this plant, 141 of which are found in the Swan, and the FS wants to log in areas adjacent to some of the occurrences. What science has been published to show that logging adjacent to these threatened plants won't destroy their habitat? How was the buffer determined? Is it an arbitrary number? An untested hypothesis? Again, the science please. How long have surveys on H. Aquatilus been going? Have the studies looked at how logging has impacted the plants, or only how many plants are in the ponds?</p> <p>Just because there are plants in ponds next to areas that have been logged doesn't mean that the plant hasn't been affected by logging. It just means there are still plants. Does the FS have a baseline standard to compare how many plants were in the ponds prior to logging next to the ponds? How about logging with a 300 foot buffer? In other words, has there been any studies to compare the number of plants before logging only 300 feet from a pond versus never logging anywhere near a pond? If not, then how can the FS say that a 300 foot buffer is sufficient? What about dust, debris, or any other disturbances? How can the FS say with any certainty that by avoiding ponds with a 300 foot buffer the hydrologic processes affecting the plants won't be affected?</p> <p>How is it that the FS claims they want to restore things to a natural condition but in the same breath say that this project will actually move H. Aquatilus habitat even farther from historical conditions? For example, the DEIS at 3-70 says that only 30 percent of the ponds had harvesting or road activities within 300 feet of the ponds in 1934. Today, 85 percent of the ponds have been disturbed by logging. How will hacking down trees next to H. Aquatilus ponds help or maintain their habitat? Isn't the FS acting arbitrary and capricious?</p> <p>The DEIS says that all occupied ponds within the logging project have been affected from previous management activities, but fails to say how. The DEIS says that thinning may spread noxious weeds which can outcompete howellia. Given that there is a chance these plants will be lost, the FS should reconsider logging anywhere near areas that contain H. Aquatilus.</p> <p>It is fallacious to say that just because the plants survived the last round of logging they are better off, or that another round of logging won't affect</p>		<p>project to ensure that effects would be minimized. The buffers are in accordance with Forest Plan Amendment #20.</p> <p>Monitoring of 68 occupied ponds has occurred for the past 9 years (DEIS, page 3-71). Trend analysis has not yet been completed; however the data indicates that annual abundance levels are influenced by annual precipitation.</p> <p>The findings in the DEIS indicate that there would not be significant impacts to these plants.</p> <p>The project includes specific Design Criteria to minimize the impacts of the proposed actions to this species. The DEIS discloses that there may be some indirect effects regarding hydrologic changes, but that the Design Criteria would minimize these impacts. The Design Criteria include a 300-foot buffer around occupied ponds to minimize the potential for noxious weed spread.</p> <p>It should be noted that Howellia buffers have been defined by a specific amendment to the Forest Plan (Amendment #20) and have been in place many years. The buffers prescribed in the Forest Plan have been effective and the active howellia monitoring program which occurred for a decade found the standards to be effective.</p> <p>A BA was conducted for Howellia. In response to this BA the FWS concluded that the project is not likely to result in loss of species viability or create significant trends towards listing.</p>

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<p>them. Please give some science to show the effects of past logging on H. Aquatilus. If there is no science addressing these questions, please consider that you are acting arbitrarily by going forth with a logging project without knowing the consequences on a federally threatened plant.</p> <p>Indirect effects resulting from the proposed logging project are expected to contribute to the cumulative degradation of the environmental baseline for H. Aquatilus. The total of these effects <b>would not likely reach thresholds</b> where the plant couldn't maintain its ability to survive in the Swan. DEIS at 3-80. How do you know that? Where is the science? This is all speculation.</p> <p>The FS must also survey the full extent of potential habitat for the Yellow Lady's Slipper before it can say with any certainty what the impacts of the logging project will be on this species. A Final EIS shouldn't even be considered until all areas containing potential habitat for this species are surveyed.</p> <p>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? Also, the EIS must state the expected time frame for treating all slash (nor for other "fuel" treatments, such as prescribed burning outside logged areas).</p> <p>It is erroneous to assume that BMPs will assure water quality will be maintained, if present conditions are in many locations already in violation of the standards. The failure of BMPs is obviously implicated in the scientific literature. Beschta et al. (2004) state:</p> <p style="padding-left: 40px;">It is perhaps widely accepted that "best management practices" (BMPs) can reduce damage to aquatic environments from roads. Time trends in aquatic habitat indicators indicate, however, that BMPs fail to protect salmonid habitats from cumulative degradation by roads and logging (Espinosa et al. 1997.) Ziemer and Lisle (1993) note a lack of reliable data showing that BMPs are cumulatively effective in protecting aquatic resources from damage.</p>	<p style="text-align: center;">←63</p> <p style="text-align: center;">←64</p> <p style="text-align: center;">←65</p>	<p><b>Response to Comment #63:</b> Surveys for yellow lady slipper were conducted, but were limited to the potential habitat that is within areas to be treated. No Yellow lady slipper orchids were found within the treatment units of the project. Additional habitat outside of units was not surveyed as the presence or absence of yellow lady slipper in areas not treated has no effect. The analysis discloses that the project would not result in cumulative effects that would lead to a trend towards Federal listing (DEIS, page 3-80).</p> <p><b>Response to Comment #64:</b> The fuels treatments of post logging slash would be included as part of the timber sale contract and is funded by the value the wood products. The treatment of "post logging slash" is an intrinsic part of the operation and is very certain to occur. Treatment of slash would occur within 3 years after harvest activity. As stated on page 1-6 of the DEIS, "Management activities not involving timber harvest (Ecosystem Maintenance Burning) might occur during the next 10 years and be completed by 2018. The ecosystem burning is dependent on the availability of burning windows, funding, and equipment needed to achieve the desired results."</p> <p><b>Response to Comment #65:</b> BMPs are identified for all roads that would be used during the activities, as well as specific Design Criteria to minimize impacts to fisheries and beneficial uses (ROD, Appendix 4). Stream buffers will be incorporated as well to further minimize the impacts.</p> <p>It has been shown through monitoring that the implementation of road decommissioning, including removal of drainage structures and restoration of overland flow paths through the road prism, reduces the amount of fine sediment in streams. This, in turn, allows the stream substrate to become cleaner which helps in maintaining pools and spawning gravels.</p> <p>The DEIS on page 3-128 explains that this project is consistent with the CWA.</p> <p>While it is true that BMP's cannot prevent all possible damages to water</p>



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<p>that the ECA model consistently underestimated measured increases in flow caused by roads and logging.</p> <p>The ECA model outputs are also inadequate to disclose the effects of the alternatives and cumulative effects on peakflows and resultant impacts on aquatic resources, because the model estimates changes in <u>average monthly peakflow</u> caused by logging and roads. King (1989) clearly noted that estimates of average monthly peakflows triggered by logging and roads are not adequate for estimating likely changes in channel conditions and sediment transport caused by logging and roads:</p> <p style="padding-left: 40px;">...the largest 7 or 8 days of streamflow account for the majority of the bedload movement...Average monthly streamflows are usually not a good index of bedload transport, and 'changes in average annual monthly peakflows have no meaningful effect on sediment transport' (Megahan, 1979) and are thus poor indicators of changes in channel-forming flows.</p> <p>King (1989) also stated:</p> <p style="padding-left: 40px;">Thus, it is the relatively few <u>high flow days</u> that have the potential for shaping the channel. Increases in <u>short duration high flows</u> following harvesting and road building are more important in terms of potential channel erosion and bedload transport than increases in longer duration high flows such as the <u>maximum mean monthly streamflows...</u> (emphasis added).</p> <p style="padding-left: 40px;">Therefore, increases in short-duration highflows are more important than longer duration highflows in shaping the channel, and any procedure to estimate streamflow responses and set limits on harvesting should focus on these shorter duration highflows.</p> <p>King (1989) clearly indicates that FS reliance on average monthly peakflows is inadequate for determining the effects of proposed and cumulative effects on peakflows and resultant impacts on channel erosion, bedload transport, sedimentation, bank erosion, fish habitat, fish survival, and downstream flooding impacts. Average peakflows are not the greatest concern. Sediment transport and channel change are greatly affected during more extreme events.</p>		

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<p>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.</p> <p>Sec. 6. of the National Forest Management Act states:</p> <p style="padding-left: 40px;">(g) As soon as practicable, but not later than two years after enactment of this subsection, the Secretary shall in accordance with the procedures set forth in section 553 of title 5, United States Code, promulgate regulations, under the principles of the Multiple-Use, Sustained-Yield Act of 1960, that set out the process for the development and revision of the land management plans, and the guidelines and standards prescribed by this subsection. The regulations shall include, but not be limited to-</p> <p style="padding-left: 80px;">(3) specifying guidelines for land management plans developed to achieve the goals of the Program which-</p> <p style="padding-left: 80px;">(E) insure that timber will be harvested from National Forest System lands only where-</p> <p style="padding-left: 120px;">(i) soil, slope, or other watershed conditions will not be irreversibly damaged;</p> <p>NFMA regulations at 36 C.F.R. § 219.27 (Management requirements) state:</p> <p style="padding-left: 40px;">(a) Resource protection. All management prescriptions shall—</p> <p style="padding-left: 80px;">(1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land;</p> <p style="padding-left: 40px;">(b) Vegetative manipulation. Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall--</p> <p style="padding-left: 80px;">(5) Avoid permanent impairment of site productivity and ensure conservation of soil and water resources;</p> <p>Lacy, 2001 examines the importance of soils for ecosystem functioning and</p>	<p>←68</p>	<p><b>Response to Comment #68:</b> No issues related to livestock grazing were raised during the analysis. There are no Range Allotments operating within the Cooney McKay Project area.</p>

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<p>points out the failure of most regulatory mechanisms to adequately address the soils issue. From the Abstract:</p> <p>Soil is a critical component to nearly every ecosystem in the world, sustaining life in a variety of ways—from production of biomass to filtering, buffering and transformation of water and nutrients. While there are dozens of federal environmental laws protecting and addressing a wide range of natural resources and issues of environmental quality, there is a significant gap in the protection of the soil resource. Despite the critical importance of maintaining healthy and sustaining soils, conservation of the soil resource on public lands is generally relegated to a diminished land management priority. Countless activities, including livestock grazing, recreation, road building, logging, and mining, degrade soils on public lands. This article examines the roots of soil law in the United States and the handful of soil-related provisions buried in various public land and natural resource laws, finding that the lack of a public lands soil law leaves the soil resource underprotected and exposed to significant harm. To remedy this regulatory gap, this article sketches the framework for a positive public lands soil protection law. This article concludes that because soils are critically important building blocks for nearly every ecosystem on earth, an holistic approach to natural resources protection requires that soils be protected to avoid undermining much of the legal protection afforded to other natural resources.</p> <p>The article goes on:</p> <p>Countless activities, including livestock grazing, recreation, road building, logging, mining, and irrigation degrade soils on public lands. Because there are no laws that directly address and protect soils on the public lands, consideration of soils in land use planning is usually only in the form of vaguely conceived or discretionary guidelines and monitoring requirements. This is a major gap in the effort to provide ecosystem-level protection for natural resources.</p> <p>The rise of an “ecosystem approach” in environmental and natural resources law is one of the most significant aspects of the continuing evolution of this area of law and policy. One writer</p>		

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<p>has observed that there is a fundamental change occurring in the field of environmental protection, from a narrow focus on individual sources of harm to a more holistic focus on entire ecosystems, including the multiple human sources of harm within ecosystems, and the complex social context of laws, political boundaries, and economic institutions in which those sources exist.</p> <p>As federal agencies focus increasingly on addressing environmental protection from an holistic perspective under the current regime of environmental laws, a significant gap remains in the federal statutory scheme: protection of soils as a discrete and important natural resource. <b>Because soils are essential building blocks at the core of nearly every ecosystem on earth, and because soils are critical to the health of so many other natural resources—including, at the broadest level, water, air, and vegetation—they should be protected at a level at least as significant as other natural resources.</b> Federal soil law (such as it is) is woefully inadequate as it currently stands. It is a missing link in the effort to protect the natural world at a meaningful and effective ecosystem level.</p> <p>... This analysis concludes that the lack of a public lands soil law leaves the soil resource under-protected and exposed to significant harm, and emasculates the environmental protections afforded to other natural resources.</p> <p>(Emphasis added.) The problems Lacy (2001) identifies of regulatory mechanisms certainly exists in Regional and Forest-level standards and other guidance applicable for this Project.</p> <p>The amount of detrimental soil disturbance would increase with the implementation of the proposal, therefore soil productivity would be reduced. Some activities, such as log landing construction and intensive log skidding would essentially permanently reduce the productivity of the soil on those sites directly affected.</p>	<p>←69</p>	<p><b>Response to Comment #69:</b> The DEIS discusses soil productivity on pages 3-13 through 3-35. As part of the project design (see DEIS, Table 2-14) logging methods and seasons are selected that are appropriate for the conditions of the particular unit.</p> <p>As discussed in the soils section of the DEIS, winter harvest would be allowable, but is not required as the site specific soil conditions are such that summer harvest, as designed, would meet appropriate soil conservation standards (DEIS, pages 3-31 to 34).</p> <p>As discussed in the soils portion of the DEIS (DEIS, page 3-30) the Design Criteria, particularly skid trail spacing and slash mats, will result in meeting of soil protection standards in all units in all action alternatives.</p>

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<p>The intent of the Regional Soil Quality Standards is that the FS must, in each case, consider the cumulative effects of both past and proposed soil disturbances to assure the desired soil conditions are met. This includes impacts from activities that include logging, firewood gathering, livestock grazing, and motorized recreation impacts.</p> <p>It should be noted that the FS assumes that maintaining soil productivity is achieved simply by limiting detrimental disturbance to no more than 15% of an Activity Area (logging or “treatment” unit) or limiting “total resource commitment” in another arbitrarily defined area. Unfortunately, the scientific adequacy of the FS’s methodology for maintaining soil productivity on the Flathead NF has never been demonstrated. The FS’s determination that it may permanently damage the soil over that much area and still meet NMFA and planning regulations is arbitrary. The EIS does not cite any scientific basis for adopting its percent numerical limits.</p> <p>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?</p> <p>Soil conditions outside of the current logging units are not shown. How can an assessment of the cumulative impacts to soil conditions within the project area be analyzed without this information? Based on almost the total absence of existing detrimental soil disturbance in proposed logging units, it appears that the current project focuses logging activities in areas that have never before been logged, or in some cases have been lightly disturbed from past logging. Yet this area in general has been heavily</p>	<p>←70</p> <p>←71</p> <p>←72</p> <p>←73</p>	<p>The DEIS on page 3-35 states “The soil analysis indicates that all alternatives and all activities proposed by the alternatives would meet the Region 1 Soil Quality Standards through the implementation of management practices outline in the Design Criteria (Table 2-14) and restoration of landings and heavily used skid trails, if needed, to reduce the total amount of detrimental soils impacts.</p> <p><b>Response to Comment #70.</b> The DEIS discusses the effects on the Soil Resource on pages 3-13 through 3-35. The DEIS discloses multiple times, the past activities have affected soils. As stated on page 3-15 of the DEIS, “In order to determine the existing condition of soils within the proposed activity areas, field investigations were conducted to determine if and how the existing soil condition was affected by past management activities or other dispersed activities.” The existing disturbance, including past management activities, for each activity area is presented in Table 3-7 of the DEIS. The Cumulative Effects Worksheet Soils also provides information on the effects of past, current, and foreseeable activities in combination with the Cooney McKay Project to Soils (Project File Exhibit J-13). Field investigation notes and a summary sheet are located in the Project File (Exhibit J-3).</p> <p><b>Response to Comment #71:</b> The discussion of the adequacy of FSM 2500-99-1 is beyond the scope of this analysis. The Research Branch of the Forest Service is the designated entity for conducting research. National Forests are permitted to conduct monitoring based on established standards and protocols. In the case of soils, FSM 2500-99-1 provides current standards for this monitoring. The Cooney McKay Project is consistent with the Regional Soil Standards (DEIS, page 3-35).</p> <p><b>Response to Comment #72:</b> With regard to soil productivity, this analysis uses activity areas directed in FSM 2500-99-1. The impacts of past disturbances (including logging) are shown as the percent existing disturbance in the DEIS on pages 3-31 through 3-33, Table 3-7.</p> <p><b>Response to Comment #73:</b> Soil monitoring has occurred and is referenced in the DEIS on page 3-14 (Project File Exhibits J-5, J-7, J-9, J-10 and J-11). The cumulative impacts of all disturbances were considered in assessing percent detrimental disturbance in proposed activity areas. Since no activities would occur outside of the treatment units, no cumulative effects would occur. There is no need to display the existing conditions of soils outside of the</p>

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<p>logged in the past, both on private and public lands, likely resulting in significant detrimental soil disturbance in much (most?) of the project area outside the proposed cutting units. If the proposed logging units are the primary areas that remain with relatively undisturbed soils in an otherwise heavily impacted area, how is the current proposal consistent with the FNF's statutory requirement to maintain soil productivity?</p> <p>Furthermore, the DEIS states: "In units that obviously had no past soil disturbance from management activities, a walk through was conducted to verify the condition. However, all units with a possibility of additional effects from proposed activities were examined on the ground." Does this mean that all units except for non commercial units were surveyed?</p> <p>The only way for there to be any meaning to the numerical standards in cases where logging is proposed over previously disturbed soils and where activity area boundaries are not kept constant is if a qualified soil scientist actually performs site-specific field measurements to measure the existing percentages of detrimental soil disturbance within the already-established boundaries of activity areas, and within newly-established activity areas.</p> <p>On p. 3-19, the DEIS states: "The analysis of effects for soils assumes that all practices outlined in Chapter 2, Design Criteria, would be implemented and would be effective. Yet the precision, or amount of error, in the measures of detrimental disturbance for previously logged activity areas has not been disclosed. Therefore how can we know what likelihood there is that the Design Criteria will be effective or not?"</p> <p>The FS, in its "Response to Motion for Preliminary Injunction" brief in recent litigation on the Kootenai NF, states in regards to a scientific report, "Dr. Schloeder's purported 'statistical analysis' reports no confidence intervals, standard deviations or standard errors in association with its conclusions." The FS must be held to the same standards of data and information quality it expects of those who disagree with FS conclusions. 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.</p>	<p>←74</p> <p>←75</p> <p>←76</p>	<p>activity areas or treatment units.</p> <p><b>Response to Comment #74:</b> Yes. All units except the non commercial units were surveyed. These were not surveyed since the proposed activities would not involve equipment or ground disturbing activities, therefore would not have a detrimental impact on soils. (DEIS, page 3-15). Field investigation notes and a summary sheet are located in the Project File (Exhibit J-3).</p> <p><b>Response to Comment #75:</b> The Forest Soil Scientist trained the technicians who performed the field reviews of existing detrimental disturbance within the proposed activity areas. The extent of existing disturbance was made on an activity area basis, as directed by FSM 2500-99-</p> <p><b>Response to Comment #76:</b> As stated above, monitoring reports have been conducted on soils similar to those in the Cooney McKay Area. These reports are located in Project File Exhibits J-5, J-7, J-9, J-10, and J-11.</p>



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<p>Noxious weed presence may lead to physical and biological changes in soil. Organic matter distribution and nutrient flux may change dramatically with noxious weed invasion. Spotted knapweed (<i>Centaurea biebersteinii</i> D.C.) impacts phosphorus levels at sites (LeJeune and Seastedt, 2001) and can hinder growth of other species with allelopathic mechanism. Specific to spotted knapweed, these traits can ultimately limit native species' ability to compete and can have direct impacts on species diversity (Tyser and Key 1988, Ridenour and Callaway 2001).</p> <p>The EIS must disclose how the productivity of the land been affected in the project area and forest-wide due to noxious weed infestations, and how that situation is expected to change.</p> <p>Please disclose the results of weed treatments on the Flathead NF that have been projected to significantly reduce noxious weed populations over time, or prevent spread. This is an ongoing issue of land productivity.</p> <p>The chemical and biological make-up of the specific soils in the project area, and their ability to withstand detrimental disturbance that lowers soil productivity is not a subject adequately taken up by the FS. Harvey et al., 1994 state:</p> <p>The ...descriptions of microbial structures and processes suggest that they are likely to provide highly critical conduits for the input and movement of materials within soil and between the soil and the plant. Nitrogen and carbon have been mentioned and are probably the most important. Although the movement and cycling of many others are mediated by microbes, sulfur phosphorus, and iron compounds are important examples.</p> <p>The relation between forest soil microbes and N is striking. Virtually all N in eastside forest ecosystems is biologically fixed by microbes... Most forests, particularly in the inland West, are likely to be limited at some time during their development by supplies of plant-available N. Thus, to manage forest growth, we must manage the microbes that add most of the N and that make N available for subsequent plant uptake. (Internal citations omitted.)</p>	<p>←81</p> <p>←82</p>	<p><b>Response to Comment #81:</b> Please refer to the DEIS on pages 3-53 through 3-64 for the discussion on Noxious Weeds. Weed inventory show weeds are concentrated along roads, which are highly disturbed sites. Results of weed inventories saw no movement of weeds onto undisturbed areas. Design Criteria in the ROD, Appendix 2 will be implemented to reduce the impact of seed spread.</p> <p><b>Response to Comment #82:</b> The Flathead National Forest has completed an EA analyzing the effects of treating noxious and invasive plants (USDA Forest Service 2001a - FNF Noxious and Invasive Weed Control EA) (Project File Exhibit Q-5). A Forest-Wide Weed Management Plan is currently under development to outline methodology in prioritizing treatment and inventory and monitoring protocols. In addition, this plan will outline a methodology for minimizing the establishment and spread of invaders in all projects and Special Use Permits, such as grazing allotments and timber management areas. Currently, treatment and inventory is prioritized at quarterly meetings of the Flathead National Forest Weed Advisory Group.</p> <p>Efforts to control the spread of noxious weeds include prevention, containment, and eradication methods. Eradication is generally limited to localized areas and Category 2 and 3 species. Methods used for eradication include hand pulling and herbicide applications. Approximately 20 miles of roads have been treated with herbicides within the project area.</p> <p>Containment methods are used to prevent weeds from spreading into new areas and reducing the coverage, if possible, in existing infestations. Containment methods include closing infested areas to travel, washing vehicles and equipment upon entering or leaving an infested area, using weed free seed and straw mulch for re-vegetation, hand pulling, and herbicide application around the perimeter of the infestation. Prevention uses similar techniques as containment, with the objective of preventing a new weed</p>

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<p>The FS has essentially admitted that it is in the dark as far as doing scientific research on soil productivity changes following management activities. In response to comments on the Black Ant Salvage DEIS, Lewis &amp; Clark NF, the FS states:</p> <p>Soil Quality Standards “provide benchmark values that indicate when changes in soil properties and soil conditions would result in significant change or impairment of soil quality based on available research and Regional experience” (Forest Service Manual 2500, Region 1 Supplement 2500-99-1, Chapter 2550 – Soil Management, Section 2554.1).</p> <p>A formal research study, the “Long Term Soil Productivity Study,” is currently being conducted by the Research Branch of U.S. Department of Agriculture, Forest Service to validate these soil quality standards. (USDA Forest Service, 2002a.)</p> <p>It is clear that the intent of the Regional Soil Quality Standards is that the FS must, in each case, consider the cumulative effects of both past and proposed soil disturbances to assure that soil productivity will be maintained. This includes impacts from activities that include logging, motorized vehicle use, etc. Such cumulative effects analysis found in the Soil and Water Conservation Practices Handbook (FSH 2509.22). FSH 2509.22 states:</p> <p><u>Practice 11.01 – Determination of Cumulative Watershed Effects</u></p> <p>OBJECTIVE: To determine the cumulative effects or impact on beneficial water uses by multiple land management activities. Past, present, or reasonably foreseeable future actions in a watershed are evaluated relative to natural or undisturbed conditions. Cumulative impacts are a change in beneficial water uses caused by the accumulation of individual impacts over time and space. Recovery does not occur before the next individual practice has begun.</p> <p>EXPLANATION: The Northern and Intermountain Regions will manage watersheds to avoid irreversible effects on the soil resource and to produce water of quality and quantity sufficient to maintain beneficial uses in compliance with State Water</p>	<p>←83</p>	<p>infestation rather than limiting spread of an existing one.</p> <p><b>Response to Comment #83.</b> Please refer to Response to Comment #70.</p>

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<p>Quality Standards. Examples of potential cumulative effects are: 2) excess sediment production that may reduce fish habitat and other beneficial uses; 3) water temperature and nutrient increases that may affect beneficial uses; 4) compacted or disturbed soils that may cause site productivity loss and increased soil erosion; an 5) increased water yields and peak flows that may destabilize stream channel equilibrium.</p> <p>IMPLEMENTATION: As part of the NEPA process, the Forest Service will consider the potential cumulative effects of multiple land management activities in a watershed which may force the soil resource's capacity or the stream's physical or biological system beyond the ability to recover to near-natural conditions. A watershed cumulative effects feasibility analysis will be required of projects involving significant vegetation removal, prior to including them on implementation schedules, to ensure that the project, considered with other activities, will not increase sediment or water yields beyond or fishery habitat below acceptable limits. The Forest Plan will define these acceptable limits. The Forest Service will also coordinate and cooperate with States and private landowners in assessing cumulative effects in multiple ownership watersheds.</p> <p>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.</p> <p>Adams and Froehlich (1981) provide reasons why impacts beyond the directly compacted area must be considered in any reasonable definition of soil productivity:</p> <p>Since tree roots extend not only in depth but also in area, the potential for growth impact also becomes greater as compaction affects more of the rooting area. In a thinned stand, for example, you can expect the greatest growth impacts in residual trees that closely border major skid trails or that have been subject to traffic on more than one side of the stem.</p> <p>For a study done on the Kootenai and Flathead National Forests, soil scientists measured soil bulk densities, macropore porosities, and</p>	<p>←84</p> <p>←85</p>	<p><b>Response to Comment #84:</b> Please refer to Response to Comment #52.</p> <p><b>Response to Comment #85:</b> More recent studies used in this analysis (Powers, et al. 2005) indicate that in coarse textured soils, compaction may increase productivity due to increased water holding capacity (DEIS, page 3-20). Monitoring of other treatments with the same Design Criteria used in this project have shown that these criteria are effective in meeting regional soil standards (DEIS, pages 3-19 and 3-20).</p> <p>The DEIS specifically addresses the concerns raised here on page 3-30. Bulk density measurements have been taken (Project file Exhibit J-5, J-7), and pre-assessment monitoring indicates that existing disturbance is no more than 4 percent in any proposed unit.</p> <p>Thank you for the review of some past research on soil disturbance. It was</p>

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<p>infiltration rates using paired observations of disturbed vs. undisturbed soils. They discovered that although “the most significant increase in compaction occurred at a depth of 4 inches... some sites showed that maximum compaction occurred at a depth of 8 inches... (and) Furthermore, ... subsurface compaction occurred in glacial deposits to a depth of at least 16 inches.” (Kuennen, Edson, and Tolle, 1979.) The FS does not have enough soil bulk density and other compaction monitoring data collected at the adequate soil depths and in enough sites on the Flathead NF to be able to make accurate predictions about the effects of soil compaction in project area activity areas.</p> <p>Following a study by Cullen et al., (1991) which was carried out on the Kootenai NF and the Flathead NF, the authors concluded: “This result lends support to the general observation that most compaction occurs during the first and second passage of equipment.” And Page-Dumroese (1993), in a FS research report investigating logging impacts on volcanic ash-influenced soil in the Idaho Panhandle NF, states, “Moderate compaction was achieved by driving a Grappler log carrier over the plots twice.” Page-Dumroese (1993) also cited other studies that indicated: “Large increases in bulk density have been reported to a depth of about 5 cm with the first vehicle pass over the soil.” Williamson and Neilsen (2000) assessed change in soil bulk density with number of passes and found 62% of the compaction to the surface 10cm to come with the first pass of a logging machine. In fine textured soils Brais and Camire (1997) demonstrated that the first pass creates 80 percent of the total disturbance to the site.</p> <p>Adams and Froehlich (1981) state, “Unfortunately, little research has yet been done to compare the compaction and related impacts caused by low-pressure and by conventional logging vehicles.”</p> <p>The FS recognizes that soil quality standards must be validated. FSM 2500-99-1 requires that Forest Supervisors must:</p> <ul style="list-style-type: none"> <li>• Assess ... whether (soil quality standards) are effective in maintaining or improving soil quality;</li> <li>• Evaluate the effectiveness of soil quality standards and recommend adjustments to the Regional Forester; and</li> <li>• Consult with soil scientists to evaluate the need to adjust management practices or apply rehabilitation measures.</li> </ul>		<p>interesting to note that Brais and Camire, found that only the wheel track portion of the skid trail had compacted soils and that the space between the tracks showed no significant effects from compaction. Because the estimate of disturbance areas of the skid trail is based on the entire width of the trail, the FNF is probably overestimating the disturbance to the soil resource thus providing a built-in safety factor to help maintain the Regional Standard of less than 15 percent disturbance.</p>







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<p>The EIS must include the results of monitoring of noxious weed infestation from past management actions in the Flathead 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. The EIS must also disclose the risks of the herbicides that would be used.</p>	<p>←94</p>	<p>The project will require BMPs to be brought to standard on any roads used to haul wood products. The Forest Service cannot require BMP work to be done on roads not used during project implementation. Haul miles which will receive BMP treatment will occur as described for each alternative in the DEIS on pages 2-12, 2-16 and 2-20. The resource enhancements described in the DEIS (pages 2-10 and 2-11) describe priority projects which, though not needed to mitigate effects of the proposed action, will enhance fish, watershed, and noxious weed conditions in the project area. Actual implementation of the projects will depend on funding. It is hoped that through use of Stewardship Contracting that the Cooney McKay Project may generate sufficient funding to accomplish some or all of the projects, but if not, the Forest will seek other funding sources such as grants, partnerships or Congressionally appropriated funds to accomplish the projects over time.</p> <p><b>Response to Comment #94:</b> Please refer to the Noxious Weed-Invasive Plant Species Section of the DEIS on pages 3-53 through 3-64 for a discussion of the present condition of these species in the project area and weed management on the Flathead National Forest. Throughout this section, monitoring of noxious weed infestations from past management actions is discussed. As stated earlier, a Forest-Wide Weed Management Plan is currently under development to outline methodology in prioritizing treatment and inventory and monitoring protocols. In addition, this plan will outline a methodology for minimizing the establishment and spread of invaders in all projects. Monitoring of known weed populations in the project area would be implemented under the authority and guidance of the Flathead National Forest Noxious and Invasive Weed Control Decision Notice (May 2001) and EA (March 2001) (Project File Exhibit Q-5).</p> <p>The project looks to avoid introduction of weeds through contract practices as described in Appendix 2 in the ROD. Cleaning, revegetation limitation of ground disturbance, are all measures designed to limit the spread of noxious weeds. The effects of these activities have been considered as part of the cumulative effects.</p> <p>The project also incorporates specific Design Criteria (ROD, Appendix 2) to minimize the use of herbicides for weed control. All herbicide applications within this project are authorized under a separate decision and the analysis of effects, specific chemicals to be used, and sideboards for application are discussed in the Flathead National Forest's NEPA decision for noxious weed treatment (Noxious and Invasive Weed Control EA)</p>

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<p>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. Since the FS doesn’t cite research that proves otherwise in its NEPA analyses, we can only conclude that “forest health” discussions are unscientific and biased toward logging as a “solution.” Please consider the large body of research that indicates logging, roads, and other human caused disturbance <u>promote</u> the spread of tree diseases and insect infestation.</p>	←95	<p><b>Response to Comment #95:</b> Active forest management reduces susceptibility to insects and disease in a number of ways that include:</p> <ul style="list-style-type: none"> <li>• Removing inoculum sources, e.g. removing mistletoe infections.</li> <li>• Increasing stand vigor by reducing stand density. Increased vigor increases stand resistance to attack. Gibson, 1990, reports that reducing basal area in Lodgepole pine stands by commercial harvest significantly reduced mountain pine beetle caused mortality when compared to adjacent unharvested stands. (Gibson, 1990). DeMars, et al. 1992 reports that reducing stand stocking in 70 to 80 year old PP stands to 55-70 percent of full utilization will relieve competitive stress among the remaining trees, improve their vigor and make them less prone to successful beetle attack.</li> <li>• Modifying stand species composition to favor disease and insect resistant native species.</li> </ul> <p>The proposed treatments are designed to have these effects on insect and disease susceptibility.</p>
<p>For example, multiple studies have shown that annosus root disease (Heterobasidion annosum, formerly named Fomes annosus), a fungal root pathogen that is often fatal or damaging for pine, fir, and hemlock in western forests, has increased in western forests as a result of logging (Smith 1989). And researchers have noted that the incidence of annosus root disease in true fir and ponderosa pine stands increased with the number of logging entries (Goheen and Goheen 1989). Large stumps served as infection foci for the stands, although significant mortality was not obvious until 10 to 15 years after logging (Id.).</p> <p>The proportion of western hemlock trees infected by annosus root disease increased after precommercial thinning, due to infection of stumps and logging equipment wounds (Edmonds et al. 1989, Chavez, et al. 1980).</p> <p>Armillaria, a primary, aggressive root pathogen of pines, true firs, and Douglas-fir in western interior forests, spreads into healthy stands from the stumps and roots of cut trees (Wargo and Shaw 1985). The fungus colonizes stumps and roots of cut trees, then spreads to adjacent healthy trees. Roots of large trees in particular can support the fungus for many years because they are moist and large enough for the fungus to survive,</p>	←96	<p><b>Response to Comment #96:</b> Overall, management treatments are developed with consultation and advisement from the Regional Pathologist and Entomologist. Although, they do not visit every treatment unit, alternative treatments are developed with consideration of their suggestions.</p> <p>The potential for harvesting, roads and human disturbance affecting forest insects and diseases is considered in all action alternatives. One alternative not considered in detail included extensive treatment of stands exhibiting extensive root rot at mid slopes (DEIS, page 2-4, and 2-5).</p> <p>The primary root diseases in the project area are Armillaria ostoyae and Phellinus weirii (Gibson, 1993, 1994; Hagle, 1997 from Meadow Smith EIS).</p> <p>In the interior northwest, spread of <i>Armillaria ostoyae</i> occurs mostly through root-to-root contact and by rhizomorphs, with basidiospore infection limited. (USDA Forest Service, 1991, page 117, Wargo and Shaw, 1985). Therefore, infections will spread only a short distance from the edge of a root-disease center, via root to root contact, or by rhizomorphs traveling a short distance. Armillaria is present on the Flathead NF, with the primary hosts being Douglas-fir and true firs (grand and subalpine firs). It is not considered a</p>

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<p>and disease centers can expand to several hectares in size, with greater than 25% of the trees affected in a stand (id.). Roth et al. (1980) also noted that Armillaria was present in stumps of old-growth ponderosa pine logged up to 35 years earlier, with the oldest stumps having the highest rate of infection.</p> <p>Filip (1979) observed that mortality of saplings was significantly correlated to the number of Douglas-fir stumps infected with Armillaria mellea and laminated root rot (Phellinus weirii). McDonald, et al. (1987) concluded the pathogenic fungus Armillaria had a threefold higher occurrence on disturbed plots compared to pristine plots at high productivity sites in the Northern Rockies. Those authors also reviewed past studies on Armillaria, noting a clear link between management and the severity of Armillaria-caused disease.</p> <p>Morrison and Mallett (1996) observed that infection and mortality from the root disease Armillaria ostoyae was several times higher in forest stands with logging disturbance than in undisturbed stands, and that adjacent residual trees as well as new regeneration became infected when their roots came into contact with roots from infected stumps.</p>		<p>primary pathogen affecting mature ponderosa pine, In fact, ponderosa pine is considered one of our more tolerant species of armillaria root disease. The study cited (Roth et al. 1980) is from an area in central Washington where armillaria is an aggressive pathogen on ponderosa pine, which is relatively rare in western Montana. Relative to the McDonald, et al. 1987 study, the results are not as clear as you indicate. Although the incidence of pathogenic Armillaria increased with disturbance on high-productivity sites, it was also found that disturbance had no significant effect on Armillaria on low-productivity sites, and there was no significant difference between undisturbed low-productivity sites and disturbed high-productivity sites (McDonald, et al. 1987). The severity of root disease is dependent on species present on the site. If the site has been regenerated to a root disease-susceptible species, then the severity of root disease will likely increase. But, if the site has been regenerated to a root disease-tolerant species, then the severity of the disease will likely be lessened over time</p> <p>Neither <i>Leptographium wageneri</i> nor <i>Verticicladiella wagenerii</i> have been found on the Forest. Note: These two are the same pathogen, with different names due to taxonomic protocol. This disease rarely occurs in western Montana, and where it does, it remains an occasional occurrence, rather than spreading into an active root disease center (Lockman, 2004).</p>
<p>Precommercial thinning and soil disturbance led to an increased risk of infection and mortality by black-stain root disease (<i>Leptographium wageneri</i>) in Douglas-fir, with the majority of infection centers being close to roads and skid trails (Hansen et al. 1988). Also another Black-stain root disease (<i>Verticicladiella wagenerii</i>) occurred at a greater frequency in Douglas-fir trees close to roads than in trees located 25 m or more from roads (Hansen 1978). Witcosky et al. (1986) also noted that precommercially thinned stands attracted a greater number of black-stain root disease insect vectors.</p>	←97	<p><b>Response to Comment #97:</b> See Response to Comment #96. After extensive pre-commercial thinning within Douglas-fir stands on the Flathead National Forest, it should be noted that significant mortality due to these diseases has not occurred.</p>
<p>Complex interactions involve mechanical damage from logging, infestation by root diseases, and attacks by insects. Aho et al. (1987) saw that mechanical wounding of grand fir and white fir by logging equipment activated dormant decay fungi, including the Indian paint fungus (<i>Echinodontium tinctorium</i>).</p> <p>Trees stressed by logging, and therefore more susceptible to root diseases are, in turn, more susceptible to attack by insects. Goheen and Hansen (1993) reviewed the association between pathogenic fungi and bark</p>	←98	<p><b>Response to Comment #98:</b> There is no grand fir or white fir present in the proposed treatment areas.</p>

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<p>beetles in coniferous forests, noting that root disease fungi predispose some conifer species to bark beetle attack and/or help maintain endemic populations of bark beetles.</p> <p>Goheen and Hansen (1993) observed that live trees infected with Laminated root rot (<i>Phellinus weirii</i>) have a greater likelihood of attack by Douglas-fir beetles (<i>Dendroctonus pseudotsugae</i>). Also, Douglas-fir trees weakened by Black-stain root disease (<i>Leptographium wageneri</i> var. <i>pseudotsugae</i>) are attacked and killed by a variety of bark beetle species, including the Douglas-fir bark beetle (<i>D. pseudotsugae</i>) and the Douglas-fir engraver (<i>Scolytus unispinosus</i>) (id.).</p> <p>The root disease <i>Leptographium wageneri</i> var. <i>ponderosum</i> predisposes ponderosa pine to several bark beetle species, including the mountain pine beetle (<i>D. ponderosae</i>) and the western pine beetle (<i>D. brevicomis</i>) (Goheen and Hansen 1993).</p> <p>A variety of root diseases, including black-stain, <i>Armillaria</i>, and brown cubical butt rot (<i>Phaeolus schweinitzii</i>), predispose lodgepole pine to attack by mountain pine beetles in the interior west. The diseases are also believed to provide stressed host trees that help maintain endemic populations of mountain pine beetle or trigger population increases at the start of an outbreak (Goheen and Hansen 1993).</p> <p>Grand and white fir trees in interior mixed-conifer forests have been found to have a high likelihood of attack by the fir engraver (<i>Scolytus ventralis</i>) when they are infected by root diseases, such as laminated root rot, <i>Armillaria</i>, and <i>annosus</i> (Goheen and Hansen 1993).</p> <p>More western pine beetles (<i>Dendroctonus brevipennis</i>) and mountain pine beetles (<i>D. ponderosae</i>) were captured on trees infected by black-stain root disease (<i>Ceratocystis wageneri</i>) than on uninfected trees (Goheen et al. 1985). The two species of beetle were more frequently attracted to wounds on trees that were also diseased than to uninfected trees. They also noted that the red turpentine beetle (<i>Dendroctonus valens</i>) attacked trees at wounds, with attack rates seven-to-eight times higher on trees infected with black-stain root disease than uninfected trees. <i>Spondylis upiformis</i> attacked only wounded trees, not unwounded trees (Id.).</p>		

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<p>The economics analysis must include an itemized disclosure of costs vs. benefits, and a Present Net Value (PNV) discussion.</p> <p>Thank you for your attention to these concerns. Please keep both organizations on your list to receive further mailings on the proposal. Also, please mail to the Wild West Institute copies of the Biological Evaluations/Assessments for all Threatened, Endangered, Proposed, and Sensitive fish, wildlife, and plant species, as well as USFWS Biological Opinions and concurrence letters for this proposed project, as soon as they are available.</p> <p>It is our intention that you include in the record and review all of the literature and other incorporated documents we've cited herein. <b>Please contact WildWest Institute if you have problems locating copies of any of them.</b></p> <p>We conclude this comment letter with this passage from Frissell and Bayles (1996):</p> <p style="padding-left: 40px;">Most philosophies and approaches for ecosystem management put forward to date are limited (perhaps doomed) by a failure to acknowledge and rationally address the overriding problems of uncertainty and ignorance about the mechanisms by which complex ecosystems respond to human actions. They lack humility and historical perspective about science and about our past failures in management. They still implicitly subscribe to the scientifically discredited illusion that humans are fully in control of an ecosystemic machine and can foresee and manipulate all the possible consequences of particular actions while deliberately altering the ecosystem to produce only predictable, optimized and socially desirable outputs. Moreover, despite our well-demonstrated inability to prescribe and forge institutional arrangements capable of successfully implementing the principles and practice of integrated ecosystem management over a sustained time frame an at sufficiently large spatial scales, would-be ecosystem managers have neglected to acknowledge and critically analyze past institutional and policy failures. They say we need ecosystem management because public opinion has changed, neglecting the obvious point that public opinion has been shaped by the glowing promises of past managers and by their</p>	<p>←99</p> <p>←100</p> <p>←101</p>	<p><b>Response to Comment #99:</b> The economic analysis is disclosed on pages 3-271 through 3-278 of the DEIS. The analysis includes a discussion of PNV.</p> <p><b>Response to Comment #100:</b> We shall do so.</p> <p><b>Response to Comment #101:</b> We have reviewed all literature and other incorporated documents you've cited in your letter.</p>

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<p>clear and spectacular failure to deliver on such promises.</p> <p>Sincerely,</p> <p>/s/</p> <p>Cameron Naficy</p>		

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<p style="text-align: center;"><b><i>Friends of the Wild Swan</i></b>  <b><i>P.O. Box 5103</i></b>  <b><i>Swan Lake, MT 59911</i></b></p> <p>January 28, 2008</p> <p>Swan Lake Ranger District                      Attn: Steve Brady                      200 Ranger Station Road                      Bigfork, MT 59911</p> <p>Cooney McKay Forest Health and Fuels Reduction Project                      Via e-mail to: comments-northern-flathead-swan-lake@fs.fed.us</p> <p>Dear Steve,</p> <p>Please accept the following comments on the Cooney McKay Forest Health and Fuels Reduction Project on behalf of Friends of the Wild Swan. We commend the Swan Lake District for listening to public input on the field tour, verifying the status of old-growth stands and dropping five stands that were slated to be seedtree logged from all alternatives in the EIS.</p> <p>We still have some concerns that are outlined below.</p> <p><b>Fisheries/Water Resources</b></p> <p>1) There is a discrepancy in the EIS. On page 2-25 it states that the effects determination for bull trout is May Affect: Likely to Adversely Affect but on page 3-160 the determination is May</p>	←1	<p><b>Response to Comment #1:</b> Thank you for noticing this error. The Errata for the project will show that the correct statement on page 3-160 should read “May Affect: Likely to Adversely Affect as stated on page 2-25.” The effects analysis described in the DEIS was based on the correct call based on the May BA. The initial BA you found in the record was sent the FWS, but based on their interaction with us, we mutually concluded that the burning proposed in Cooney Creek 1 and Cooney Creek 2, could lead to sediment input to Cooney Creek. Though this sediment increase was small we concluded that we should revise the BA’s conclusion, that the burning, which is a part of the proposed action, could adversely affect individual bull trout. We then revised the BA and the one used is the May 2007 BA. Subsequently the FWS documented their review in their BO (which is included in the record) This BO, includes terms and conditions, which require the two burns not be done in the same year and that we move the lower end of the burn boundaries at least 300 feet up from the stream channel. These measures would further limit the small increase in sediment predicted from the burns. These actions will be included as Design Criteria in the ROD. With these Design Criteria in place, the BO for the project concludes that the project in general, and specifically the burns (which are the elements of the project leading to the LAA call), would not jeopardize bull trout.</p>

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<p>Affect: Not Likely to Adversely Affect. There are 2 Biological Assessments in the project file so we assume that the latter one dated May 2007 is the applicable one. Does the difference in determinations affect the analysis in the DEIS? Are there actions that need to be taken or analyzed to mitigate for the LAA determination that were not in the DEIS?</p> <p>2) The fisheries analysis appears to be based on replacing 5 culverts with new bridges or larger culverts. Replacing these culverts is to facilitate better fish passage and/or to ensure that the culvert on Pony Creek does not blow out and dump sediment into the streams. We were disturbed to see on page 3-152 that funding to replace all 5 culverts may not be available and that only one or two may be addressed within the next 11 years. <u>Funding must be secured to address all 5 of these culverts.</u> The Pony Creek twin culverts are considered to be “high risk” and are vulnerable to failure and must be removed. Before the Flathead moves forward with another timber sale that builds more roads (even if they are called temporary) it must fix the problems caused by past management.</p>	<p>←2a</p>	<p><b>Response to Comment #2a:</b> The enhancement projects described in the comment are not required to reduce the impacts of the forest health and fuels treatments that carry out the Purpose and Need for this proposal. For example, the analysis for fuels and forest health treatments does not indicate that these treatments would increase the risk of a culvert failure on Pony Creek.</p> <p>The Fisheries and Watershed Analysis and determination of effects for forest health and fuels aspects of the project do not rely on the implementation of the Resource Enhancement Projects. However, we do want to disclose the impacts of these Resource Enhancement Projects if they are implemented so they will have received appropriate environmental analysis prior to implementation. Modeling and analysis of the effects of the forest health and fuel reduction activities associated with the project to fish and watershed were not based on assumptions that any of the Resource Enhancements would take place. The direct and cumulative impacts of the forest health and fuel reduction activities of the project are distinguishable from the cumulative and direct impacts of the Resource Enhancements. The potential of a small increase in sediment from burning (as discussed above) resulted in the specific Design Criteria described, but the other elements of the project had little negative impact to fish or water resources (DEIS, pages 2-11, 3-120 through 3-130 and 3-152 through 3-158).</p> <p>In general, the effects analysis discloses that the Resource Enhancement Projects described, pro-actively could improve the existing situation for a variety of resources. By listing these projects as Resource Enhancements, it is our intent to disclose and analyze their specific and cumulative impacts and benefits. These are often very expensive projects. The likelihood of implementation is dependent on funding. One potential source of such funding is to include them in a Stewardship Contract offering. Depending on the bid offering, some or all of these projects, could then to be financed by the value of the products generated by the forest health and fuel reduction activities being proposed. The actual value available to finance these projects in a Stewardship Contract is dependent on the bid we receive. The bid, in turn, is directly influenced by the market place conditions at the time of offer. Other sources of funding for these projects include grants, partnerships, and, in very limited amounts, appropriated funds. There is no guarantee relative to any of these sources of funding. That uncertainty is appropriately disclosed in the DEIS. However, including these projects as potential enhancements, does allow for their implementation under NEPA and sets the Forest up to be able</p>

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<p>The EIS cannot state that there is a positive trend for habitat connectivity (page 3-157) unless the work to replace the fish passage barriers is actually done. This is the same for the culverts at Pony Creek. In the analysis for Alternative 1 it states that annual erosion would continue and if the Pony Creek culverts fail they would potentially erode another 43 tons of sediment. If the culverts are not certain to be replaced in Alternatives 2-4 then there must be analysis of how this risk of culvert failure will affect the watershed when coupled with the timber harvest and building and removing temporary roads.</p>	<p>←2b</p>	<p>to take advantage of a variety of funding opportunities to implement these projects as they arise. We have been successful in implementing many such projects on the Forest taking this approach.</p> <p>This project itself may yield funds to implement some or all of these projects and, to that degree, dramatically increases the possibility of implementation. However, these projects are not needed as mitigation for the remaining activities, and therefore are not required to be implemented to “offset” project effects (DEIS, page 2-11).</p> <p><b>Response to Comment #2b:</b> The analysis states that a positive trend for habitat connectivity would be realized if the reasonably foreseeable actions are implemented, referring to the fish enhancement projects. Many of these actions, if implemented, would contribute to a positive trend for connectivity. There is a reasonable likelihood, that through the project itself or other funding sources that some, or all of these projects, including Pony Creek, could be undertaken. Please be aware that the current culverts at Pony Creek are not thought to be fish barriers. Rather, this enhancement is being proposed relative to the sediment risk discussed in your comment and the DEIS.</p> <p>As discussed above, the DEIS makes clear that there is not a certainty of funding for the Resource Enhancement Projects (DEIS, page 2-11). If none of the projects were implemented the existing conditions described in the DEIS would remain in place.</p> <p>Finally, relative to fish habitat connectivity, the Meadow Smith Timber Sale is also a reasonably foreseeable activity. The contract has been awarded and contains the required replacement of another culvert with a bridge where the 901 Road crosses Pony Creek, and replaces a culvert thought to be total fish barrier on Cat Creek. In addition Meadow Smith includes the replacement of a culvert thought to be a partial barrier on Cat Creek. In this situation the existing culverts were all thought to be fish barriers. Their replacement with a bridge and two designed pipes, which will allow fish passage will contribute to a positive trend in fish habitat connectivity.</p> <p>Conversely, the DEIS discloses that timber harvest and temporary roads do not measurably affect the potential to increase the risk of a culvert failure on Pony Creek. As displayed on page 3-123, neither water yield or peak flow are predicted to measurably increase in Pony Creek as a result of the timber</p>

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<p>We have the same concerns about the BMP work that is slated to be done on 20 of the 35 inventoried TMDL sites. Will this work actually be done? Or is it dependent on available funding? The analysis of sediment loading and erosion is dependent on this work being completed, if there is a possibility that it is not then the watershed effects must be analyzed and disclosed in the EIS.</p> <p>The EIS should evaluate whether replacing culverts is preferable to decommissioning these roads. This would involve integrating the fish passage and sediment issues related to native fish with the security needs of grizzly bears and other wildlife.</p> <p>3) The DEIS discloses that implementation of the action alternatives will result in delayed recovery for fish habitat conditions in Condon, Falls, Alder, Meadow and Pony Creeks. (See pages 3-155 and 3-157) Why is this an acceptable outcome?</p>	<p>←2c</p> <p>←3</p> <p>←4</p>	<p>harvest or temporary roads. The Resource Enhancement Project proposed on Pony Creek does not influence this prediction as discussed in the DEIS (pages 3-122 through 3-124). Specific discussion of the long- and short-term risk relative to culvert failure of the Pony Creek resource enhancement itself is discussed on page 3-124 of the DEIS.</p> <p><b>Response to Comment #2c:</b> The DEIS (page 2-10) states “BMPs required under Timber Sale Contracts must be completed before timber is hauled.” All BMPs identified are necessary to meet BMP standards, and would be implemented.</p> <p><b>Response to Comment #3:</b> The culvert replacements are on main roads open yearlong to public use, or provide access to private lands. Decommissioning these roads is outside the scope of the project.</p> <p><b>Response to Comment #4:</b> The current deviation from baseline water yield conditions in these creeks is described in Table 3-36 and in the text on page 3-123 of the DEIS. The water resource analysis states “Modeling output suggests that the existing flows are well with acceptable levels for the geomorphology of the streams and the land forms from which they flow” (DEIS, page 3-119). Thus, though there is “recovery” yet to be anticipated because the watersheds are not in pristine condition, the current conditions are within acceptable limits.</p> <p>The action alternatives modeled cause such small increases in water yield (at most a 1 percent increase above current conditions) that though a delay in recovery is likely, the impacts of this delay would likely not be measurable (DEIS, page 3-155).</p> <p>The outcome is acceptable because, as stated on page 3-157 “As reviewed in the Water Resources Section, the modeled water yields are not anticipated to impair water quality or stream bank stability, and therefore fish habitat should be unchanged from current conditions. The delay of water recovery is simply a delay in improvement of fish habitat.” Given the existing conditions are acceptable, as described above and that the impacts of delay of further recovery are small to possibly immeasurable, and given that the amount of delay varies from at most 4 years to likely no delay (DEIS, page 3-157), the conclusion was that this was an acceptable impact. It should also be noted that the action alternatives do reduce the likelihood of a large-sized stand-replacing fire in the analysis area. Such an event could dramatically impact</p>

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<p><b>Wildlife</b></p> <p><b><u>Cumulative Effects</u></b></p> <p>We do not believe that the cumulative effects analysis for wildlife is complete. It states in the EIS that the Meadow Smith project would be analyzed but we could not find any indication that it was. The Meadow Smith project contract has been awarded, the sale has been laid out but it has not yet been logged so in all probability this project will be taking place at the same time as the Cooney McKay project resulting in increased impacts to wildlife. The same may be true with the Condon Fuels Project.</p>	<p>←5a</p>	<p>channel morphology which is associated with detrimental effects to fish habitat (DEIS, page 3-155).</p> <p><b>Response to Comment #5a:</b> Logging on the Condon Fuels Project is complete. The DEIS lists the Meadow Smith Project, as well as other project current and reasonably foreseeable projects in Table 3-2 (pages 3-7 through 3-10). The Cumulative Effects Worksheets in the project file also identify these activities, and are included in the analysis of effects. The analysis assumes that all activities are completed, so that a worst case of potential cumulative effects are incorporated.</p> <p>For example, the existing condition for lynx habitat components (forage/denning) takes into account the results of the Meadow Smith treatments in the Lynx Analysis Unit (LAU). Similarly, when analyzing the effects to the wolf prey base and to ungulate species, the results of treating winter range in the Meadow Smith Project are included in the Cooney McKay Analysis. Specifically, the existing condition assumes the decrease in winter range as a result of logging on the Meadow Smith Project. As described in the grizzly bear analysis, the Swan Valley Grizzly Bear Conservation Agreement, specifically subunit rotation, works at mitigating cumulative effects from multiple projects on multiple jurisdictions. In regards to grizzly bear, the timing of the Cooney McKay Project and the Meadow Smith Project should not be a critical security issue because Meadow Smith treatments will occur during the denning season and Cooney McKay treatments would only occur when the subunit is open or during denning. When considering the existing condition for other wildlife species in the Cooney McKay area, the amount of hiding cover, forested stands, forest openings, etc., assumed that the Meadow Smith treatments had already occurred. For old growth associated species, the Meadow Smith stands where old growth is going to be treated were analyzed as providing open grown, old growth forest habitat. This is consistent with the analysis of environmental consequences in the Meadow Smith SEIS. The fact that the Meadow Smith Project has not been implemented yet, and the results of the proposed old growth treatments are not yet known, is part of the reason that the decision for Cooney McKay will</p>





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<p><b><u>Old-Growth Forest Habitat and Wildlife Species</u></b></p> <p>1) Map 3-7 shows old-growth stands but doesn't show what is next to them. Are they young stands? Mature stands? Stands slated for logging? Are the old-growth stands connected? Can they be connected? After the proposed logging habitat connections that currently exist will be severed by cutting units and/or temporary roads. Where are mature stands that can be recruited as replacement old growth? We believe there should be an effort by the Flathead to connect rather than fragment old-growth forest habitat and this project doesn't do that.</p>	<p>←11</p>	<p>entire winter range and added in the cumulative effect of the Meadow Smith Project, it lowered the existing amount of thermal cover on this winter range area from 63 to 56 percent, which is still within Forest Plan standards.</p> <p>In the Cooney McKay Project, Alternatives 2 and 3 would reduce thermal cover by 65 acres, which when considered across the whole winter range area, changes the existing thermal cover by less than 1 percent. Alternative 4 dropped the treatment of these 65 acres; therefore there would be no change in thermal cover. This change of 65 acres, although important locally to white-tailed deer (on a small scale), is not visible in the numbers (percentages) at the larger scale. There is a map of thermal cover for white-tailed deer on page 3-305 of the DEIS. Note that thermal cover is not mapped for other ownership lands or where NFS lands are not designated as MA 9. Consequently, it could be expected that in actuality there is more thermal cover on the ground (e.g., riparian areas and unharvested forested stands) than what is actually mapped.</p> <p><b>Response to Comment #11:</b> The DEIS describes the stand structure for the entire project area on page 3-43. Stand files showing the juxtaposition of young, mature, and stands slated for harvest are in the project file (Project File Exhibit G-18). In no case do proposed treatments sever existing old growth stands from forested cover and isolate those old growth habitats. There is a limited amount of regeneration harvest (max. 79 acres) proposed; however, these units do not isolate old growth stands. The other types of harvest proposed would not inhibit connectivity due to the type of harvest being proposed, and in fact, would tend to move these stands more rapidly toward old growth conditions, a positive move towards old growth connectivity.</p> <p>As displayed in the Cooney McKay Vegetative Cover Maps for Alternative 3 - Modified (Maps 4A &amp; 4B) in the ROD, there is existing vegetative cover across the landscape, on both NFS ownership, private ownership, and other private corporate lands (PCTC). The NAIP imagery allows a visual display of the vegetative cover that currently exists on the landscape. The outlines overlaid on the imagery show where old growth stands are located on the landscape, where intermediate harvest is proposed, and where seed tree harvest is proposed. Only the seed tree harvest units would create openings that would not provide hiding cover for wildlife. The old growth stands would remain untreated under Alternative 3 - Modified, and the intermediate harvest units would still retain over 50 percent canopy cover following treatment.</p>

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<p>2) The EIS cites studies about different species’ old-growth habitat requirements. Goshawks require about 20% of a 6,000-acre home range being old-growth forest. Pine marten need 250-500 acres and pileated woodpeckers need 100 to 250 acres. Average patch size in the project area is 87 acres with the range of patches between 10 and 305 acres. (Page 3-184) We find it hard to reconcile the fact that the project area is not currently meeting the needs of old-growth associated species yet all of the action alternatives will impact old-growth forests by either building roads in or adjacent to old-growth forest and/or placing seedtree units adjacent to old-growth forest. In the checkerboard ownership in the Swan the best chance for old-growth species to survive is on Forest Service land. This project incrementally chips away at old growth by either logging, creating edge or creating smaller patches all of which is detrimental to old-growth species.</p>	<p>←12</p>	<p>These maps were created to visually demonstrate that the amount of vegetative cover on the landscape would not change significantly from the existing condition with implementation of Alternative 3 Modified.</p> <p>The commercial thinning, pre-commercial thinning, and thinning from below treatments would create a healthier, faster growing stand condition where the stand is more resistant to stand replacing fire than under current stand conditions. These stands are more likely to reach old growth conditions sooner with the proposed treatments, and they would be more resistant to a stand replacing wildfire. The analysis in the DEIS does not indicate that such treatments would sever habitat connections as stated in the comment (DEIS, pages 3-131 to 3-248).</p> <p>In addition to the intermediate harvest treatments described above, there are 79 acres of seed tree harvest (regeneration treatment) proposed in Alternatives 2 and 3. The seed tree harvest is proposed in stands exhibiting bark beetle mortality and root rot. The understories of these stands are primarily lodgepole pine and/or Douglas-fir, with minor components of other species. Ponderosa pine and western larch are currently minor components that are declining in health and vigor. The presence of western larch and ponderosa pine indicate the potential for these sites to support these species. These treatments would retain all ponderosa pine and western larch, removing Douglas-fir, lodgepole, and other species. The intent of these treatments is to promote regeneration of western larch and ponderosa pine by reducing competition for resources, removing fuel loadings making them more resistant to disturbance, and increasing the amount of these species across the landscape.</p> <p>The project file contains more site specific data for these stands. Left unattended, the trajectory of these stands is toward increased mortality, and slow growth. These stands do not contain sufficient large trees to be considered old growth at this time, and the trend of the stands is to continue to unravel with increasing surface fuels, until a new stand is regenerated. In the absence of the proposed treatments, the most likely mechanism to regenerate these stands is a stand replacing fire. In neither the proposed action nor the no action alternative is the trajectory of these stands toward an old growth condition (DEIS, pages 3-43, 3-47, 3-48, and 3-49).</p> <p><b>Response to Comment #12:</b> On page 3-184, the DEIS gives an <i>example</i> of research done in the southwestern United States that suggests that</p>

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<p>3) How long is temporary displacement for wildlife species? Is it months, years, decades? How are wildlife with smaller home ranges supposed to survive temporary displacement when there are 3 Forest Service timber sales in addition to Plum Creek timber sales occurring at virtually the same time?</p> <p>4) The EIS discloses that goshawks need approximately 20% of their 6,000-acre home range in old-growth forest (pages 3-184 and 3-212) and there are potentially 3 territory blocks in the project area. There are 3,200 acres of old-growth habitat in the project area. In order to maintain sufficient goshawk habitat there needs to be 3,600 acres of old growth in the project area. This project increases the unsuitable habitat for goshawk in an area that is already deficient.</p>	<p>←13</p> <p>←14</p>	<p><i>approximately</i> 20 percent of the goshawks' home range in that area may need to be in an old growth habitat condition. In North America, the size of goshawk home ranges during the nesting period varies from 1,400 to 8,650 acres (Hargis et al. 1994 and Kennedy et al. 1994) depending on factors such as sex of the bird, habitat conditions, region of the United States, etc. Obviously the percentage of old growth habitat in relation to overall home range size would vary as well. In the Cooney McKay Project Area, approximately 6,000 acres as an average home range size was used in an attempt to be consistent with the Meadow Smith Project Analysis.</p> <p>The analysis for old growth associated wildlife species does not indicate that the project area is not currently meeting the needs of old growth associated species, as the comment states. The analysis acknowledges that although the amount of mature, closed-canopy forest in the Swan Valley is within the expected historic range of variability, the mature forest patch sizes have decreased over time and are more fragmented; however, the analysis goes on to demonstrate that the effects from the proposed project would not be significant. For the northern goshawk, the analysis indicates that the proposed treatments may impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or loss of viability to the population or species.</p> <p>The seed tree units are proposed due to existing stand conditions that are not conducive to these stands reaching old growth characteristics in the future, as described above (Response to Comment #11). It is the intention of the Forest Service that the treatments proposed, over time, should increase old growth patch size. In contrast to incrementally chipping away at old growth, we believe that the prescriptions used are more likely to move the treated stands in the area to healthier more resilient conditions than currently exists. Consistent with the Purpose and Need for the proposal, this would leave more stands in a condition to move toward (or maintain) old growth attributes than the No Action Alternative. The stands treated will also be less susceptible to stand replacement fire under a wider range of future fire conditions.</p> <p><b>Response to Comment #13:</b> Refer to Response to Comment #9.</p> <p><b>Response to Comment #14:</b> As described in Response to Comment #12, in North America, the size of goshawk home ranges during the nesting period varies from 1,400 to 8,650 acres depending on a variety of factors. The percentage of old growth habitat in relation to overall home range size would vary as well. In the Cooney McKay Project area, <i>approximately</i> 6,000 acres</p>



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<p>7) All the wildlife species analyzed in the DEIS require corridors to move for foraging, denning, nesting and seasonal habitats. But the EIS doesn't tell us: Where are these corridors? What is the habitat quality in them? What size are they? Are they wide enough to protect from edge effects and provide security? Are they fragmented by roads or past logging units? How much canopy cover, thermal cover or hiding cover is in them? How much down woody debris and snags are in them? What type of habitat is considered suitable?</p> <p>Corridors of interior forest habitat between old growth habitat with a minimum width of &gt;100 meters have been recommended by scientists. Does the Flathead have any actual width criteria you are using to define corridors in the project area? All corridor habitat in the project area should be mapped and both current and long-term objectives defined for maintaining these corridors over time.</p>	<p>←17</p>	<p>analysis of sensitive species included a discussion of existing habitat and habitat conditions for the different species, which may be found within the project area (DEIS, pages 3-194 through 3-223). Determinations were made on whether significant impacts would occur. The wildlife analysis also included discussion of Forest Management Indicator Species and migratory birds (DEIS, pages 3-230 through 3-248). After a discussion of existing conditions for these species and the environmental consequences of implementing the Cooney McKay Project, it was determined that no significant population impacts would be triggered as a result of the proposed actions.</p> <p>The project file contains the document, "Flathead National Forest Evaluation and Compliance with NFMA Requirements to Provide for Diversity of Animal Communities," which addresses the natural history, population, habitat, and distribution of wildlife species which can be found on the Flathead National Forest. This document discusses the threats to the different species, conservation measures in place to address those threats, and an evaluation of the current situation for the different species at the Forest and Regional level. This information is useful in the analysis of impacts to species and populations from proposed activities to determine whether impacts may be significant or not.</p> <p><b>Response to Comment #17:</b> As discussed in the Responses to Comments #11 and #12 above, we do not believe the proposed treatments eliminate habitat connections. Most of the treatments retain significant amounts of vegetation and will continue to serve as potential corridors for wildlife traveling between various habitats.</p> <p>As displayed in the Cooney McKay Vegetative Cover Maps for Alternative 3 - Modified (Maps 4A &amp; 4B) in the ROD, there is existing vegetative cover across the landscape, on both NFS lands, private ownership, and other private corporate lands (PCTC). The NAIP imagery allows a visual display of the vegetative cover that currently exists on the landscape. The outlines overlaid on the imagery show where old growth stands are located on the landscape, where intermediate harvest is proposed, and where seed tree harvest is proposed. Only the seed tree harvest units would create openings that would not provide hiding cover for wildlife. The old growth stands would remain untreated under Alternative 3 - Modified, and the intermediate harvest units would still retain over 50 percent canopy cover following treatment. These maps were created to visually demonstrate that the amount of vegetative cover on the landscape would not change significantly from the existing condition with implementation of Alternative 3 - Modified.</p>

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<p>8) There is no analysis of blowdown effects to old-growth forests, riparian areas, wetlands or other forest attributes. Will blowdown be salvage logged?</p>	<p>←18</p>	<p><b>Response to Comment #18:</b> Blowdown potential is discussed in the DEIS on pages 3-49 through 3-50. The treatments have the potential to increase the amount of blowdown; however, this potential is anticipated to be minor. In the case of the seed tree harvest proposed, there are several site specific factors to be noted, which significantly mitigate the risk of extensive blowdown. Units 8-7 and 8-8 are downwind of the prevailing wind pattern relative to old growth. The exposure created by these units to strong winds is very limited. It has also been observed that the upwind side of the adjacent old growth adjoining these units is an old clearcut on PCTC’s Section 7, which is well regenerated. The western edge of these old growth stands has a very wide and long clearing adjacent to them on PCTC land and the stands have not significantly unraveled. Strongly-rooted ponderosa and larch dominate the dry sites in these stands.</p> <p>Similarly Unit 30-56 creates an 8-acre opening with the largest trees retained within it, next to an old growth stand dominated by very wind firm species, predominately larch, and ponderosa pine, and large Douglas fir. Though the DEIS discloses some potential for wind throw, the limited size of this unit, which is also buffered to the west (the prevailing wind direction) by intact stands, is such that the risk of unraveling of the adjoining old growth stand to the east is very limited. Seed Tree Unit 26-20, which is small ( 6 acres) in size, adjoins old growth only on the northwest tip of the unit, again upwind of the prevailing wind. Units 26-91 and 26-95 are lodgepole and Douglas-fir stands. They have significant beetle activity. They also contain scattered remnant ponderosa and larch. The large ponderosa and larch will be left, which will have some buffering affect on the old-growth stand to east of these units. The old growth stands to the east are dominated by large very wind firm, ponderosa and larch. Numerous similar stands adjoining large clearcuts on PCTC lands have not been observed to be significantly unraveling. Given the silvicultural needs (significant insect activity) in the seed tree stands compared to the relatively low likelihood of significant impact to the adjoining old growth stands due to wind throw, the decision maker concluded that the amount of risk is minimal and acceptable. Should significant blowdown occur, a separate analysis would be conducted to determine the feasibility of salvage.</p>



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<p><b>Roads</b></p> <p>1) We reiterate the concerns about temporary roads expressed in our scoping comments. It was disconcerting to find that in addition to the temporary roads planned for the project that there may be 1 to 2 miles of unplanned roads built. (Page 3-153)</p> <p>Building roads, even temporary ones across the many wet areas and streams will have significant effects on the watershed. The impacts of building them are the same as building permanent roads such as:</p> <ul style="list-style-type: none"> <li>• The greatest surface erosion from roads occurs during the construction phase and first year after.</li> <li>• Soil erosion and compaction (as always occurs with roads) causes long-term loss of soil productivity.</li> <li>• The loss of topsoil and attendant loss of soil productivity is permanent.                         <ul style="list-style-type: none"> <li>• Road obliteration does not immediately stop severely elevated soil erosion from roads.</li> <li>• Temporary roads have enduring impacts on aquatic resources.</li> <li>• Roads and increased sedimentation cause long-term negative impacts on a variety of aquatic biota.</li> </ul> </li> </ul>	<p>←21</p>	<p>resilient to disturbances. Consistent with direction and objectives in A21, these stands are being actively managed to promote old growth development by maintaining or restoring composition and structure to a condition similar to that expected under natural disturbance and succession regimes. In addition to these treatment areas, other mid-and late-seral stands exist within the project area, which have no proposed treatments associated with them. These stands provide additional potential for recruitment of old growth. Where regeneration treatments are prescribed (seed tree), the current stand conditions do not provide old growth habitat as defined by Green et al.</p> <p>As indicated previously, the final decision for this project will not include treatment in old growth stands.</p> <p><b>Response to Comment #21:</b> As discussed in the errata enclosed in the FEIS, the total amount of temporary road is limited to 1.25 miles. The statement in the DEIS at page 3-153 was in error. Specific Design Criteria are included in the proposed actions to address the concerns raised in your comments (DEIS, pages 2-27 thru 2-35).</p> <p>Resource specific analyses disclosed in Chapter 3 of the DEIS address these concerns.</p>

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<p>This project also builds roads in and adjacent to old-growth forest stands. This creates edge, spreads weeds, facilitates destructive motorized use, causes blowdown as well as other associated yet detrimental impacts to wildlife habitat.</p> <p>2) There is no analysis of increased motorized use from temporary roads, seed tree and other treatments that remove the understory. There is no analysis of the effectiveness of road closures. What are the effects of increased vehicle access (i.e., conventional passenger vehicles, ATVs or snowmobiles) on old-growth dependent species, big game, moose and other wildlife as well as on vegetation?</p> <p>3) If the grizzly bear subunit is open for 3 years and the wildlife temporal bounds analysis is for 5 years how were the effects on wildlife from decommissioning temporary roads analyzed?</p> <p><b>Range of Alternatives</b> We appreciate that the Swan Lake District developed an alternative that did not log in old-growth forest habitat and an alternative that preserved more thermal cover than the proposed action. However, the range of alternatives presents a catch 22. Alternative 3 does not log in old growth but it does allow seedtree units adjacent to old-growth forest habitat that will create edge, increase the potential for blowdown and fragment habitat blocks. Alternative 4 does not have the seedtree units adjacent to old-growth forest stands but builds roads and logs in old-growth forest. Does there have to be a trade-off between big game and old-growth dependent wildlife?</p> <p>Please keep us informed about this project.</p> <p>Sincerely, Arlene Montgomery Program Director</p>	<p>←22</p> <p>←23</p> <p>←24</p>	<p><b>Response to Comment #22:</b> Design Criteria to prevent unauthorized use are incorporated into the project. Temporary roads would be obliterated and existing regulations prohibiting cross-country motorized use are in place and would be enforced. The direct effects of temporary roads and the use of them is analyzed many places throughout the Wildlife section of the document. If the question is based on the presumption of significant amounts of unauthorized use occurring post harvest, we believe the temporary road and obliteration and legal closures and patrol and law enforcement work would keep such activities in check. These areas are open to winter snowmobile use and such use was analyzed in Amendment 24 and not found be detrimental.</p> <p><b>Response to Comment #23:</b> Temporary roads would be decommissioned immediately after the harvest unit is logged; therefore, the effects are within the timeframe of the harvest activity.</p> <p><b>Response to Comment #24:</b> The alternatives were designed to sharply define the issues raised, which are disclosed in Chapter 2 of the DEIS. As described above, the Selected Alternative will not treat within old growth stands. The seed tree units, which will be harvested, already have opening occurring within them from root rot, but once treated will have some common edges with old growth units. These 6 units total 79 acres of the project area. There are approximately 3,226 acres of old growth within the cumulative effects analysis area for old growth (Project File Exhibit F-17 and DEIS page 3-184). As displayed on the maps referenced above, regeneration harvest would take place adjacent to a small subset of the old growth in the area. Where regeneration harvest units are adjacent to old growth, the old growth stands are large enough that it is not anticipated that blowdown would fragment the old growth habitat block. Further, though some blowdown could occur, as discussed by observation along extensive cutting lines on PCTC lands, such blowdown has not been observed to be extensive. Please see Response to Comment #18 above (DEIS, page 3-49 and 3-50).</p>



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<p><b>Swan View Coalition</b> <i>Nature and Human Nature on the Same Path</i></p>  <p>3165 Foothill Road, Kalispell, MT 59901 swanview.org &amp; swanrange.org ph/fax 406-755-1379</p> <p>January 28, 2008</p> <p>Steve Brady – District Ranger SLRD 200 Ranger Station Road Bigfork, MT 59911</p> <p>Re: Comments on Cooney McKay Project DEIS Submitted electronically to comments-northern- flathead-swan-lake@fs.fed.us</p> <p>Dear Ranger Brady;</p> <p>Please accept these comments into the formal record in the above matter, along with the included pdf concerning monitoring of grizzly bear in the Swan Valley Grizzly Bear Conservation Agreement area and the included pdf of a 12/24/07 Missoulian news article.</p> <p>Firstly, let us say we greatly appreciate that the DEIS developed alternatives that forgo logging in stands you identify as old-growth forest or as important thermal cover for whitetail deer (Alternatives 3 and 4, respectively). We urge you, however, to combine these aspects into your final alternative to be selected for implementation so both of those resources receive, at a minimum, the protection provided in</p>	<p>←1</p> <p>←2</p>	<p><b>Response to Comment #1:</b> Thank you for your participation.</p> <p><b>Response to Comment #2:</b> Your comment is noted. Alternative 3 as modified in the ROD will be the Selected Action. No treatment in existing old growth stands will occur. For more detail and the rationale for the selection of this alternative, please see the ROD. Seed tree harvest prescriptions described in Alternative 3 are maintained. Please see the Response to Comments #11, #15, and #24 in the Friends of the Wild Swan’s comments above and in the ROD. Please note that Alternative 3 as modified will also reduce harvest proposed in Sections 4 and 34 in the Rumble Creek Area in response to issues raised during the comment period in regards to white-tailed deer thermal cover. Again, more detail is available in the ROD in this regard.</p>

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<p>Alternatives 3 and 4.</p> <p>One reason for doing so is that page 3-176 of the DEIS finds there “would be an immediate decrease in hiding cover [for grizzly bear] of 79 acres in the Meadow Smith Subunit under Alternatives 2 and 3. There would be a decrease in hiding cover of 14 acres . . . under Alternative 4.” Indeed, we urge you to forgo logging of these 14 acres as well in order to provide grizzly bear better security in the face of unsustainable mortality levels in the Swan Valley.</p> <p>Please see the included pdf “Swan Valley Grizzly Bear Research and Monitoring” summary report in this regard. This report finds that, of the 24 marked bears using the Swan Valley, 42% of them have already died, along with 3 unmarked grizzly bears (page 38). The monitoring also shows grizzly bear survival was best in areas with low road densities and adequate hiding cover; meaning areas not chock full of roads, clear-cuts, overly-thinned forests, and other human developments (page 36).</p> <p>Though it goes without saying, Fish and Wildlife Service indeed calls this level of mortality “unsustainable.” See the December 24, 2007 news article included as a pdf.</p>	<p>←3a</p>	<p><b>Response to Comment #3a:</b> Thank you for the included pdf. We are very familiar with this document. The cooperating agencies in the Swan Valley Grizzly Bear Conservation Agreement (SVGBCA) joined together in 2000 (MOU 2002) to monitor grizzly bears in the Swan Valley to better understand grizzly bear use and the effectiveness of the SVGBCA. The monitoring between 2000 and 2005 documented at least 27 different grizzly bears (determined via captures and collaring; additional bears are likely but DNA data analysis is not yet complete). Of these 27 bears, 12 were fitted with satellite collars, with 10 of the grizzlies providing data for &gt; 1 month (Swan Valley Grizzly Bear Research &amp; Monitoring Presentation, p.24). One of the results of the monitoring was the documentation of high levels of bear mortality in 2003 and 2004; 4 deaths each year for a total of 8 confirmed deaths for the 2-year period (Swan Valley Grizzly Bear Research &amp; Monitoring Presentation, p.37). For the period of 2000 through 2005, there were 11 total confirmed grizzly bear deaths (Swan Valley Grizzly Bear Research &amp; Monitoring Presentation, p.37). The mortalities were due to human causes, <u>unrelated to timber management activities</u> (Swan Valley Grizzly Bear Research &amp; Monitoring Presentation, p.38, 40, and personal communication with Monitoring Team). In fact, this was particularly distressing to the cooperating agencies (USFS, Department of Natural Resources and Conservation (DNRC), PCTC, MDFWP, and FWS) that conducted the monitoring because, at first glance, the causes of mortality seemed to be outside the scope of the SVGBCA, which was initially set up to provide standards and guidelines for forest management practices that would conserve the bear and comply with the Endangered Species Act (ESA). As a result of the monitoring results, the cooperating agencies came up with recommendations to address this human caused mortality in the valley bottom, near homes and businesses: The recommendations included, (1) supporting an increased reward amount, since several mortalities were directly related to illegal poaching; (2) broaden efforts to educate and inform Valley residents on how to live with bears, since several mortalities were directly related to sanitation problems on private land; (3) support bear-resistant sanitation; and (4) support continued grizzly bear monitoring (Swan Valley Grizzly Bear Research &amp; Monitoring Presentation, p.40). This information is included to emphasize the fact that forest practices on agency and corporate lands were not considered to be a major factor in the high levels of mortality. A decrease in hiding cover on 14 acres in the Cooney McKay Project area, as described in the DEIS, would not have significant effects on grizzly bear security and would not contribute to the mortality issue for grizzly bears in the Swan Valley. The amount of the reduction and the</p>

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<p>The DEIS is in error in assuming that security can simply be provided elsewhere and that all will be well in the Project area and Swan Valley, nor does it provide a map or clear explanation of where this alleged grizzly bear security exists. On page 3-177, the DEIS simply finds “Existing areas that provide grizzly bear security are located outside the Cooney McKay Project Area. There would be no increase in the mortality risk for grizzly bears as a direct result of project implementation.”</p>	<p>←3b</p>	<p>location of it should not have a measurable effect on bears. The limited seed tree cutting proposed is well within guidelines established in the SVGBCA and the FWS has concurred that the proposed action is not likely to adversely affect bears.</p> <p>In response to your comment on grizzly bear survival being best in areas with low road densities; although this comment generally has merit, the monitoring in the Swan Valley showed that grizzly bear survival is best where people do not live around grizzly bears. The monitoring that was conducted did not demonstrate that forest management practices in the Swan Valley Grizzly Bear Conservation Area increase or decrease mortality rate for grizzly bear.</p> <p>It should also be noted that the original “alternatives considered, but not developed in detail.” screened out about 750 acres of regeneration harvest from further consideration. The limited amount of regeneration harvest being proposed (about 6 percent of all treatment acres proposed in Alternative 3) is a reflection that such treatments have only been recommended when the stand conditions were such that regeneration harvest was the only viable means to achieve longer term forest health within these stands (DEIS, page 3-47).</p> <p><b>Response to Comment #3b:</b> The SVGBCA and Amendment 19 (A19) of the Forest Plan have standards and guidelines that assure secure areas will be provided across the landscape as mitigation for displacement due to forest management practices. The SVGBCA includes an elaborate rotation system for grizzly bear subunits. Out of the 11 subunits in the Agreement area, only 4 are active at one time. The active subunits are open for management for 3-year periods, and then they are closed (inactive). Some subunits are inactive for 6-year periods. Other site specific habitat management direction in the SVGBCA that provide grizzly bear security include retention of visual screening along open roads, a limit on road building in preferred habitats, cover retention in even-aged harvest units, and limits on management in riparian areas and in important spring habitats. Amendment 19 requires security core designation in each grizzly bear subunit. The combination of these mitigating factors, including the fact that adjacent grizzly bear subunits are inactive during the treatments proposed in the Cooney McKay Project, assures that there will be areas of security for grizzly bear to move into while</p>

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<p>If this were true of all projects conducted in compliance with the Swan Valley Grizzly Bear Conservation Agreement, then the Conservation Area would not be experiencing unsustainable mortality rates. Nor, perhaps, would the Swan Range grizzly bear population be decreasing at a rate of over 2% per year, a rate that would halve the population in 30 years according to the South Fork Grizzly Bear Study Final Report. The DEIS provides no support for the notion that grizzly bears can sustain bleeding off from the Swan Range only to meet with unacceptable and unsustainable mortality risks in the Swan Valley and elsewhere.</p> <p>It is pretty clear the current Swan Valley Grizzly Bear Conservation Agreement does not provide adequate grizzly bear security for bears to not come into conflict with humans and human developments in the Swan Valley. Indeed, the pdf summary report we have included shows that bears sampled in “an area with high total road density, intensive timber management” and hundreds of small private landowners and residences (page 20) are dying at unsustainable rates on the order of 42% (page 38).</p>	<p>←3c</p>	<p>actual logging is taking place.</p> <p>Again, though there is human-caused mortality ongoing, projects of this type do not appear, based on the records of the incidents cited above, to cause or measurably contribute to such incidents.</p> <p><b>Response to Comment #3c:</b> The DEIS discloses the human caused mortalities in the Swan Valley (pages 3-178 and 3-179) and explains that the mortalities have not been related to forest management practices.</p> <p>The SVGBCA is a cooperative agreement among major landowners in the Swan Valley and the FWS to further grizzly bear conservation. The SVGBCA coordinates activities among the major landowners and requires the implementation of special land management practices. Benefits realized from implementation of the SVGBCA has been coordination among the landowning cooperators with regard to decreasing open road densities, restricting forest management activities in linkage zones during the spring period, and scheduled rotation of commercial activities during the non-denning season. In addition, the SVGBCA has been the main impetus for securing land sale guidelines in the Conservation Area. The importance of the SVGBCA to conservation of the grizzly bear in the Swan Valley cannot be overstated. We do not agree with the comment that the SVGBCA does not provide adequate security for grizzly bears.</p> <p>Not only do the cooperators conduct forest management with a conservation approach to grizzly bear (e.g. population monitoring, linkage zone management, rotation of forest activities across the landscape, and site-specific habitat management), but they have voluntarily agreed to support efforts outside of traditional forest management in an effort to reduce the level of human caused grizzly bear mortality in the Swan Valley. As discussed above, through the SVGBCA, the cooperating agencies have joined with private organizations (e.g., Defenders of Wildlife, etc.) to increase the reward amount for information leading to the arrest of bear poachers and to more aggressively pursue prosecution. The cooperators are supporting the Bear Aware Program in the Swan Valley and funding a Grizzly Bear Specialist (Bear Ranger) to work with local residents and MDFWP on informing residents, and enforcing State attractant laws. Sanitation efforts in the Swan</p>

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<p>The DEIS fails miserably in providing an adequate cumulative effects analysis, especially regarding grizzly bear. Where does the DEIS discuss the included summary report’s findings regarding mortality and grizzly bear distribution and movements? Where does it discuss other activities that may be contributing to these bears being displaced from Forest Service lands to become habituated to habitats closer to human developments and, ultimately, death? Where does it discuss the status of the Meadow Smith Timber Sale(s) and the cumulative effects of those and other projects in addition to the proposed Cooney McKay projects?</p> <p>Where does the DEIS discuss the findings of the South Fork Grizzly Bear Study, which concluded the Swan Mountain study area population is likely declining at over 2% per year - especially as it relates to the Swan Valley and Cooney McKay area likely serving as a related population sink? Where does the DEIS discuss the need to revisit the Swan Valley Grizzly Bear Conservation Agreement and perhaps implement road and motorized route density limits/standards more restrictive and on the order of the Amendment 19 standards applied to Forest Service lands where they constitute greater than 75% of the grizzly bear subunit?</p>	<p>←3d</p> <p>←3e</p>	<p>Valley have been directly supported by the SVGBCA cooperators through the purchase of bear-resistant containers and by broadening collaborative efforts. In order to monitor the success of these efforts, funding has been recently secured to continue monitoring grizzly bears in the SVGBCA area beginning in 2008 and continuing for approximately 3 years.</p> <p><b>Response to Comment #3d:</b> The analysis of cumulative effects, including mortalities in the Swan Valley, is located in the DEIS on pages 3-174 thru 3-178, in the BA), and in the TES Cumulative Effects Worksheet, Project File Exhibit F-7.</p> <p><b>Response to Comment #3e:</b> The results of the South Fork Grizzly Bear Study have been incorporated into A19 of the Forest Plan. The Cooney McKay Project is consistent with standards and guidelines in A19. In addition, the project complies with the SVGBCA, and the FS has concurred that the proposed action is not likely to adversely affect grizzly bears (Project File Exhibit F-13).</p> <p>High levels of bear mortality are certainly a concern and it is recognized that these levels of mortality are unsustainable in the long-term; however, the mortalities are clearly human related (e.g., illegal poaching, sanitation). Implementing more restrictive road standards on forested roads in lands that do not contain human dwellings is unlikely to decrease grizzly bear mortality when considering the known causes of death. Following the 2000-2005 monitoring, the cooperators discussed management actions that could possibly stem the mortality increase; the group presented their recommendations and chose not to include stricter forest management practices because it was felt that forest management was not contributing significantly to the mortalities (Swan Valley Grizzly Bear Research &amp; Monitoring Manager’s Presentation, Project File Exhibit F-6A).</p> <p>We disagree with the comment that the Cooney McKay Area is likely a</p>

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<p>It should be readily apparent by now that it does not suffice to simply say that grizzly bear security is being provided outside the Cooney McKay project area. We urge you to revisit your grizzly bear management standards for the Conservation Area and step up to the plate, implementing more restrictive road and motorized route density standards in order to help compensate for the lack of security and unacceptable levels of mortality on other land ownerships in the Swan Valley.</p> <p>We must also take exception with funding Resource Enhancement Projects, such as culvert replacements, with K-V funds, which will likely be inadequate. The Projects must be considered essential mitigation for the timber management activities and hence the timber management must be contingent upon funding of the Resource Enhancement Projects – as per the National Environmental Policy Act and its implementing regulations. Moreover, given largely inadequate road maintenance budgets and inadequate grizzly bear security in the area, perhaps permanent closure and decommissioning of these roads, with permanent removal of the culverts rather than replacement, would be a better long-term investment in limited funds.</p> <p>We also wonder why you are contemplating more old-</p>	<p>←4</p>	<p>“population sink.” Although the high levels of grizzly bear mortality in recent years, especially in 2003 and 2004, are alarming, it is unknown at this time if the Swan Valley is truly a “sink” for grizzly bears. At the time of the South Fork Study, very few bears had been documented in the Swan Valley. Previous research documented that some bears came down from the Mission Range and northern Swan Mountains to the valley bottoms in the spring, but returned to higher elevations for the remainder of the year (Mace and Waller 1997, Servheen 1983).</p> <p>Since that time, the level of research and monitoring has increased and we are learning more every day. Results from the 2000-2005 SVGBCA monitoring have demonstrated that the Mission Mountains and Bob Marshall Wilderness are connected for grizzly bears; long-distance north/south movements have been documented, connecting the Creston area with the Blackfoot Valley; it is now known that grizzly bears in the Swan Valley are spending spring, summer, and fall in the valley bottom, with little altitudinal migration; and, for unknown reasons, some bears seem to “navigate” the Swan conditions successfully. Further research/monitoring is necessary to establish population trends in the Swan Valley and the NCDE as a whole before declaring an area, specifically a localized area like Cooney McKay, as a population sink. We are optimistic that the present trend monitoring studies (DNA) and the SVGBCA monitoring beginning in 2008 will provide useful information in the effort to curb grizzly bear mortality in the Swan Valley.</p> <p>It should be noted that the authors of the South Fork Grizzly Bear Study (Rick Mace and Tim Manley) were intimately involved with the SVGBCA monitoring from 2000 to 2005, and are similarly involved in the 2008 research and monitoring design being conducted by the SVGBCA cooperators. They participated in the generation of recommendations for addressing mortality issues (Swan Valley Grizzly Bear Research &amp; Monitoring Manager’s Presentation, Project File Exhibit F-6A).</p> <p><b>Response to Comment #4:</b> Please see the Response to Comments #2a, #2b, and #4 in Friends of the Wild Swan Letter.</p>

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<p>growth treatments in Alternatives 2 and 4, before you have completed similar treatments in the Meadow Smith timber sale(s) and have had the chance to see how they do or do not work out. All the more reason to either delay the Cooney McKay project or select an alternative that leaves old-growth and adjacent mature stands alone. Similarly, if the area does not currently meet the needs of old-growth associated wildlife species, why do all action alternative in the DEIS contemplate placing roads and/or logging units next to known old-growth stands?</p> <p>Indeed, perhaps the logging aspects of the Cooney McKay proposal need to be delayed while road closures, road decommissioning, culvert removals, and other restoration activities are accomplished to provide better baseline security for fish and wildlife.</p> <p>In summary, we appreciate that the DEIS is responsive in some respects to prior public comments by including Alternatives 3 and 4. Without addressing these and the other issues discussed above through meaningful on-the-ground resource protection, however, that responsiveness will in the final analysis become nothing more than lip service and paper shuffling.</p> <p>Thank you for this opportunity to comment and please keep us fully informed of this project and proposal.</p> <p>Sincerely,</p>	<p>←5</p> <p>←6</p> <p>←7</p>	<p><b>Response to Comment #5:</b> Please refer to the Response to your Comment #2 above, as well as the Response to Friends of the Wild Swan Letter, Comment #15. In addition, the ROD contains more detail on the rationale for selecting Alternative 3 as modified.</p> <p><b>Response to Comment #6:</b> The analysis of effects includes all of the activities proposed, based upon the timing and juxtaposition of these treatments, spatially and temporally.</p> <p><b>Response to Comment #7:</b> Thank you for your comment.</p>

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<p><i>Keith</i></p> <p>Keith J. Hammer Chair</p> <p>Enc: “Swan Valley Grizzly Bear Research and Monitoring” summary report pdf 12/24/07 Missoulian news article pdf</p>		

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<p style="text-align: center;"><b>John Meyer</b>                      P.O. Box 526 / South Royalton / VT / 05068                      Phone: (406) 546-0149 / Email: <a href="mailto:JMeyer@vermontlaw.edu">JMeyer@vermontlaw.edu</a>                      January 24, 2008</p> <p>Steve Brady, District Ranger                      200 Ranger Station Road                      Big Fork, Montana 59911                      (406) 837-7501</p> <p>Transmitted via email--please acknowledge receipt</p> <p>Dear Steve,</p> <p>These are comments for the Cooney McKay logging project on behalf of Alliance for Wild Rockies and myself.</p> <ol style="list-style-type: none"> <li>1. In terms of the purported purpose and need for the project, the DEIS claims that the project will increase the probability of stopping wildfires on NFS lands before they burn onto private lands.                             <ol style="list-style-type: none"> <li>a. Aren't wildfires part of the natural landscape?</li> <li>b. Does the FS think that it can really stop wildfires from burning onto private lands?</li> <li>c. Shouldn't private landowners assume a certain amount of risk of wildfire coming onto their lands, regardless of whether the fire comes from public or private lands?</li> <li>d. Is there any risk that wildfires might enter private lands from other private lands? If so, why should the FS spend its already slim budget on protecting something that may happen</li> </ol> </li> </ol>	<p style="text-align: center;">←1</p> <p style="text-align: center;">←2</p> <p style="text-align: center;">←3</p> <p style="text-align: center;">←4</p>	<p><b>Response to Comment #1:</b> Wildfire is a natural process. However due to past fire suppression and increased human presence, high fuel buildups in some areas and the increased presence of people and homes results both in fires that react more extreme than those under natural or historic conditions. The impacts that fires can and do have on human beings is an increasing reality that did not exist historically to the extent it is does now.</p> <p><b>Response to Comment #2:</b> The analysis discloses that by reducing fuels, and fuel continuity, there is a greater potential for successful initial attack. Not all fires can be stopped, but we can increase the probability that a given fire will be less intense and under less than extreme weather conditions we can increase the chances of stopping a fire.</p> <p><b>Response to Comment #3:</b> Your point is well taken. Many local homeowners are working towards reducing fuel loadings on their property.</p> <p><b>Response to Comment #4:</b> Yes, fires might start on or move through private as well as public lands. With the intermingled ownership of the valley, the Forest Service has an obligation to reduce the potential for wildfire risk, regardless of where a fire may start or spread.</p>



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<p>2. Alternative 2</p> <p>a. The DEIS claims that Alternative 2 will focus on improving forest health and reducing hazardous fuel buildup.</p> <p>i. Is the Forest Service saying that the project area isn't healthy? Has the area ever been healthy, or is it unhealthy as a result of the FS treating it like a science experiment?</p> <p>ii. The DEIS says that 39% of the area has been regeneration harvested. (DEIS, 3-39). If all that logging has taken the project area away from historical fire conditions, what makes the FS think that more logging is the answer?</p> <p>iii. On page S-3 of the DEIS, the FS claims that “[t]hese treatments are proposed to reduce the likelihood of the loss of these stands due to a wildfire.” (referring to oldgrowth)</p> <p>1. In essence, the FS is claiming that they have to hack down all the old growth so that it isn't destroyed by wildfire. That logic is... bad. The 9<sup>th</sup> circuit court of appeals seems to think the same thing. In <i>Ecology Center v. Austin</i> the Court said that your neighboring forest was wrong on this exact same issue – using an untested hypothesis. <i>Ecology Ctr. v. Austin</i>, 430 F.3d 1057, 1064 (9th Cir. 2005).</p> <p>2. Why does the FS think the “untested hypothesis”</p>	<p>←7</p> <p>←8</p> <p>←9</p>	<p><b>Response to Comment #7:</b> The increased densities in the forested stands as a result of fire suppression have led to increases in insect and disease due to increased competition for moisture. The difference between the historic and existing vegetation conditions are described in the DEIS, pages 1-2 through 1-4. Stand conditions vary throughout the Swan Valley and that is consistent with the project. Some stands in the project area are very healthy and no treatments are recommended. Other stands, which would have been relatively open stands with large ponderosa pine and larch under more historic conditions, are now more crowded with Douglas-fir and grand-fir beneath the canopy than they would have been prior to the active fire suppression that began in the 1900's. Generally, stands are viewed as healthy if they have enough diversity, and vigor to be resilient under a variety of conditions that might normally be experienced (DEIS, page 3-43).</p> <p><b>Response to Comment #8:</b> As described in the Fire and Fuels Section of the DEIS, fire used to play a much larger role in shaping the landscape in this area. Since the 1950's, timber harvest began to replace wildland fire as the dominant process that changed vegetation patterns and fuel accumulations (DEIS, page 3-86). Particularly on drier sites within the complex stand mosaic of the Swan Valley, untreated stands experience increased in-growth of species such as lodgepole pine and Douglas-fir due to less ground fire. Not all stands developed with thinning from below by fire, but historic resource indicates many of the dry site stands, did develop this way (DEIS, page 3-41). Now significant portions of the area have much more dense vegetation than would have occurred naturally.</p> <p>Where this has occurred, the Forest Service thinks that thinning type treatments can bring the stands closer to natural conditions and leave the remaining stands both more vigorous and resilient to a broader range of wildfires (DEIS, page 3-43 thru 3-49).</p> <p><b>Response to Comment #9:</b> Please see Friends of the Wild Swan Letter, Response to Comment #15. As discussed there, the Selected Alternative will not treat old growth stands. More detail is available in the ROD.</p>

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<p>is legally sufficient this time around?</p> <p>3. Doesn't the FS have research teams and stations to prove or disprove their hypothesis separate from ranger districts?</p> <p>4. Has the "untested hypothesis" been tested by one of these teams?</p> <p>3. Alternative 3</p> <p>a. We applaud the FS for listening to citizen concerns regarding Old-Growth and at least creating an alternative that takes some of those concerns into account.</p> <p>4. Comparison of Alternatives (Page S-5)</p> <p>a. "Old-growth Maintenance"</p> <p>i. Why does the FS insist on referring to the logging of old-growth as "old-growth maintenance?"</p> <p>1. Again, it seems like a disingenuous use of rhetoric. Can't the forests maintain themselves without FS interference?</p> <p>ii. Can't old-growth maintain itself without FS interference?</p> <p>iii. Isn't the real problem that the FS hasn't allowed enough areas to act as reserves that will be mature old-growth in time?</p> <p>iv. How is the FS taking into account that they have a minimum limit of old-growth they must maintain and wildfires will subtract from that minimum? Please</p>	<p>←10</p> <p>←11</p> <p>←12</p>	<p><b>Response to Comment #10:</b> Thank you for your support.</p> <p><b>Response to Comment #11:</b> See Response to Comment #9 above, the ROD, and Response to Comment #15 in the Friends of the Wild Swan Letter.</p> <p><b>Response to Comment #12:</b> The proposed treatments would not reduce the amount of old growth, and as disclosed in the DEIS, would reduce the potential of loss due to stand replacing wildfire (DEIS, pages 3-96 thru 3-100).</p>

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<p>don't claim that you want to log old-growth to save it from fire, that won't stand up in court and it isn't forward looking at all.</p> <p>v. Besides logging old-growth to save it from fire, what other strategies does the FS have to recruit old-growth habitat during the next 10, 20, 50 years?</p> <p>vi. How much Doug fir old growth is there in the logging project area?</p> <p>1. What is the "historical average"?</p> <p>2. Was this included in the DEIS?</p> <p>a. If not, why?</p> <p>b. "Salvage"</p> <p>i. The word salvage carries with it the connotation that you are saving something from going to waste.</p> <p>vii. Does the FS really think that the trees will go to</p>	<p>←13</p> <p>←14</p> <p>←15</p>	<p><b>Response to Comment #13:</b> See Response to Comments #11, #12, and #15 in the Friends of the Wild Swan Letter.</p> <p><b>Response to Comment #14:</b> The DEIS discloses that within the analysis area (38,031 acres) approximately 10 percent of the capable NFS acres is old growth (DEIS, page 3-184). Of that, approximately 25 percent is lower elevation, the rest being upper elevation. The majority of the upper elevation is Douglas-fir. Old growth stands where Douglas-fir is the dominant tree species make up approximately 58 percent of the old growth stands (approximately 1,870 acres). Of course, some of these stands also contain some large larch or ponderosa pine trees, but they are generally considered a Douglas-fir forest type. The other percentage of old growth stands are predominately larch, ponderosa pine, or lodgepole pine.</p> <p>The historic average information does not break down by species, but is more related to area. Amendment 21 of the Forest Plan discusses the historical range of variability (HRV). Figure 9 on page 44 of A21 illustrates the historical and current condition for early, mid, and late seral communities in the lower montane, montane, and subalpine regions of the Swan Valley sub-basin. In reference to your question, "what is the historical average," the answer, relative to the A21 discussion of the HRV, is that the late seral classes are less than the historical minimum. Late seral refers to plants present during a later stage of plant community succession, which would include old growth forest. This answer is relative to the Swan sub-basin as a whole. The amount of old growth on the Flathead National Forest historically has been estimated as between 15 to 60 percent (A21; page 38). Using satellite imagery, A21 estimated that 15 percent of all NFS land on the Flathead National Forest is currently old growth (A21; page 32). The Cooney McKay Project File includes a listing of inventoried old growth stands (Project File Exhibit F-17).</p> <p><b>Response to Comment #15:</b> Salvage in this project is specifically focused on recovering economic value of trees that are dead, or dying, that are contributing towards increased fuel loadings. Trees recycle and to that extent are not wasted; however there are human uses for wood products. If trees are harvested before they have been dead too long there are many more products with higher economic values that can be made from them. Salvage is applied to harvest that makes use of trees that are dead or dying for their commercial value. Not all trees need to be used this way, but providing wood products is an important aspect in the management of National Forests.</p>

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<p>waste if they aren't cut down?</p> <p>b. Pre-commercial thinning</p> <p>i. Why doesn't the FS have to look at the cumulative impacts of not only pre-commercial thinning, but also the follow up commercial thinning?</p> <p>5. Historical Conditions</p> <p>a. The DEIS says that at the turn of the twentieth century, timber sales were few and small. (DEIS 1-2).</p> <p>i. If the forest service wants to recreate historical conditions, shouldn't current timber sales be few and small?</p> <p>ii. At first blush, it seems like a proposal to hack down six or seven hundred acres is quite large. How many other timber sales have taken place since the turn of the twenty first century? Is that pattern comparable to the twentieth century?</p> <p>iii. Please explain how at the turn of the twentieth century, at a time when timber sales were few and small, the area was supposedly composed of open area mature ponderosa pines when the DEIS says that the area is productive and moist. High productivity would lead one to believe that there would be lots of trees, not large open areas, especially in light of the fact that timber sales were few and small.</p> <p>iv. Don't ponderosa pines like dry sites, not moist, highly productive sites like the area in question?</p>	<p>←16</p> <p>←17</p> <p>←18</p>	<p><b>Response to Comment #16:</b> All actions, past, present, and reasonably foreseeable actions have been considered. Commercial thinning is often 50 to 70 years after pre-commercial thinning and the effects of activities so far out into the future are not largely quantifiable or reasonably foreseeable.</p> <p><b>Response to Comment #17:</b> The historic conditions referred to are the vegetation conditions in total. Though timber sales were small, the historic conditions included not just timber sales but the natural disturbances such as fire, which played a larger role and more frequent role at that time, not timber sales. The comment characterizes all the treatments as "hacking down 600 or 700 hundred acres." The DEIS provides information that describes the harvest treatments in considerable detail. In general the largest, healthiest trees are left after harvest. The effects of these type treatments look both at what is taken and what is left. Because we are not "hacking down 600 to 700 acres," the effects analysis reflects that the proposal is consistent to leave stands in a condition that will more closely emulate historic conditions than would the No Action Alternative.</p> <p><b>Response to Comment #18:</b> As stated in the DEIS, page 1-2, the forests developed through frequent, low and moderate intensity ground fires. This is supported by numerous research studies. The scientific basis for this conclusion is further described on page 3-41 of the DEIS. Not all or even most of the sites are dry sites. Forest types by species are described on page 3-42 of the DEIS. Ponderosa and western larch forest types constitute about 18 percent of the analysis area. Much of the proposed harvest treatment is focused on these forest types and/or at retention of these species.</p> <p>The proposed treatments are not intended to create "large openings," rather the treatments are intended to move the vegetation conditions towards a mosaic of open park-like stands of large trees, similar to the open grown forest communities of historic times. Most of the prescriptions call for residual stands with a canopy closure average of greater than 50 percent within the ground-based and cable units.</p> <p>The inset is a description of the existing conditions, where large openings are created by human settlement (pastures, hayfields, houses/yards, commercial activities, etc.).</p> <p>Ponderosa pine and western larch are species that survive well in a frequent,</p>

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<p>v. On page 1-2 of the DEIS the inset says that the large openings are numerous because of human settlement, not because the area historically had large openings.</p> <ol style="list-style-type: none"> <li>1. It is disingenuous for the FS to say that they are trying to recreate historical forest conditions when in fact the FS is trying to recreate historical human interferences. See Earth Island Institute v. U.S. Forest Service, 442 F.3d 1147, 1167, 1176 (9th Cir. 2006).</li> <li>2. Again, why is the FS trying to create large P. Pine openings in an area that did not historically have numerous, naturally occurring large openings that would provide habitat for P. Pines?</li> <li>3. The area is extremely wet and productive compared to – say Missoula – so why is the FS trying to characterize the area as habitat for P. Pine?</li> <li>4. “The warm-moist valley bottoms include the undulating flat lands of the valley floor with its many wetlands” DEIS at 3-40.             <ol style="list-style-type: none"> <li>a. Is that really where you want to create large openings for p. pines?</li> </ol> </li> <li>5. The DEIS says that there are thousands of small isolated wetlands in the logging project area. DEIS 3-67.             <ol style="list-style-type: none"> <li>a. How is it that the FS can make such a broad over-generalization that south and west facing aspects are warm dry habitats</li> </ol> </li> </ol>	<p>←19</p>	<p>low intensity fire regime. These species are well adapted to this type of fire occurrence, and were the predominant species prior to fire suppression (DEIS, pages 1-2 and 3-38). Currently, Douglas-fir and lodgepole pine are increasing in density, competing with and providing fuels for stand replacement fire, which could result in the loss of these historic species components.</p> <p><b>Response to Comment #19:</b> The majority of the wetlands are within the valley bottom, although there are scattered wetlands on the hillsides. The reference is a general discussion of the major vegetation characteristics.</p> <p>The ponds are generally within and under the forest canopy, with interspersed small meadow-like openings.</p>

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<p>supporting P. Pine? Is the FS trying to say that none of the thousands of wetlands are located in any of the south or west facing aspects?</p> <p>b. Aren't the pothole ponds that provide habitat to <i>Howellia Aquatilis</i> evidence that the area hasn't traditionally been one of numerous large openings, except when humans hacked out those openings?</p> <p>c. The FS hasn't taken a close look at the effects of Logging on <i>H. Aquatilis</i> or its habitat.</p> <p>d. There are only 217 known occurrences of this plant, 141 of which are found in the Swan, and the FS wants to log in areas adjacent to some of the occurrences.</p> <p>e. What science has been published to show that logging adjacent to these threatened plants won't destroy their habitat?</p> <p>f. How was the 300 foot buffer determined? Is it an arbitrary number? An untested hypothesis? Again the science please.</p> <p>g. How long have surveys on <i>H. Aquatilis</i> been going?</p> <p>h. Have the studies looked at how logging has impacted the plants, or only how many plants are in the ponds?</p>	<p>←20</p>	<p><b>Response to Comment #20:</b> The DEIS, pages 3-65 thru 3-82 discloses the effects to this plant, as well as other species. Specific Design Criteria have been incorporated into the project to ensure that effects would be minimized. The buffers are in accordance with Forest Plan Amendment #20.</p> <p>Monitoring of 68 occupied ponds has occurred for the past 9 years (DEIS, page 3-71). Trend analysis has not yet been completed; however, the data indicates that annual abundance levels are influenced by annual precipitation.</p> <p>The findings in the DEIS indicate that there would not be significant impacts to these plants.</p>

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<p>i. Just because there are plants in ponds next to areas that have been logged doesn't mean that the plant hasn't been affected by logging. It just means there are still plants. Does the FS have a baseline standard to compare how many plants were in the ponds prior to logging next to the ponds? How about logging with a 300 foot buffer? In other words, has there been any studies to compare the number of plants before logging only 300 feet from a pond versus never logging anywhere near a pond?</p> <p>j. How long have those studies been going?</p> <p>k. How can the FS say that a 300 foot buffer is sufficient? What about dust, debris, or any other disturbances?</p> <p>6. Historical conditions in terms of H. Aquatilus</p> <p>a. How is it that the FS claims they want to restore things to a natural condition but in the same breath say that this project will actually move H. Aquatilus habitat even farther from historical conditions? For example, the DEIS at 3-70 says that only 30 percent of the ponds had harvesting or road activities within 300 feet of the ponds in 1934. Today, 85 percent of the ponds have been disturbed by logging.</p> <p>i. Won't this project push even farther from the 30% historical conditions?</p> <p>b. How will hacking down trees next to H. Aquatilus ponds help or maintain H. Aquatilus habitat?</p>	<p>←21</p>	<p><b>Response to Comment #21:</b> The project includes specific Design Criteria to minimize the impacts of the proposed actions to this species. The DEIS discloses that there may be some indirect effects regarding hydrologic changes, but that the Design Criteria would minimize these impacts. The Design Criteria include a 300 foot buffer around occupied ponds to minimize the potential for noxious weed spread.</p> <p>It should be noted that Howellia buffers have been defined by a specific amendment to the Forest Plan and have been in place many years (Project File Exhibit H-57). The buffers prescribed in the Forest Plan have been effective and the active Howellia monitoring program, which occurred for a decade found the standards to be effective.</p> <p>A BA was conducted for Howellia. In response to this BA the FWS concluded that the project is not likely to result in loss of species viability or create significant trends towards listing (Project File Exhibit E-2).</p>

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<p>c. Isn't the FS acting arbitrary and capricious with regards to management of areas that contain H. Aquatilis?</p> <p>d. The DEIS says that all occupied ponds within the logging project have been affected from previous management activities, but fails to say how.</p> <p style="padding-left: 40px;">i. Is that because the FS has absolutely no idea how logging affects H. Aquatilis because it has never bothered to complete a single study on it?</p> <p>e. The DEIS says that thinning may spread noxious weeds which can out-compete Howellia. Given that there is a chance these plants will be lost, the FS should reconsider logging anywhere near areas that contain H. Aquatilis.</p> <p>f. How can the FS say with any certainty that by avoiding ponds with a 300 foot buffer the hydrologic processes affecting the plants won't be affected?</p> <p style="padding-left: 40px;">i. Is there science to support that conclusion?</p> <p style="padding-left: 40px;">ii. Please cite the science.</p> <p>g. How has past logging affected these plants?</p> <p style="padding-left: 40px;">i. It is fallacious to say that just because the plants survived the last round of logging they are better off, or that another round of logging won't adversely affect them.</p> <p style="padding-left: 80px;">1. Please give some science to show the effects of past logging on H. Aquatilis.</p> <p style="padding-left: 80px;">2. If you don't have science, please consider that you are acting arbitrarily by going forth with a</p>		

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<p>logging project without knowing the consequences on a federally threatened plant.</p> <p>h. The DEIS states that indirect effects resulting from the proposed logging project are expected to contribute to the cumulative degradation of the environmental baseline for H. Aquatilus. The total of these effects <b>would not likely reach thresholds</b> where the plant couldn't maintain its ability to survive in the Swan. DEIS at 3-80.</p> <p>i. How do you know that? Where is the science? This is all speculation.</p> <p>7. Yellow Lady's Slipper</p> <p>a. The FS must survey the full extent of potential habitat before it can say with any certainty what the impacts of the logging project will be on this species.</p> <p>b. A Final EIS shouldn't even be considered until all areas containing potential habitat for this species are surveyed.</p> <p>8. Harvest History</p> <p>a. The DEIS at 3-39 says that 39% of the project area has been clearcut in the past. Won't logging even more in these areas take the area even farther away from what the area looked like before it was mismanaged beginning in the 50's?</p> <p>i. The FS emphasizes the lack of old-growth ponderosa pine in the area but fails to mention how much old-growth Doug fir is in the area compared to "historic conditions".</p> <p>ii. The DEIS seems to be saying that no old-growth has been cut down in the project area. DEIS at 3-39 - 3-40.</p>	<p>←22</p> <p>←23</p>	<p><b>Response to Comment #22:</b> Surveys were conducted in the project area and no plants were located within the boundaries of proposed treatment units. The project includes specific Design Criteria to minimize the impacts of the proposed actions to this species in Appendix 2 of the ROD. The analysis discloses that the project would not result in effects that would lead to a trend towards Federal listing (DEIS, page 3-80).</p> <p><b>Response to Comment #23:</b> See Response to Comment #8 above.</p> <p>The amount of old-growth Douglas-fir is not affected by the proposed action, and is still present on the landscape. The project is specifically focused on maintaining the remaining old-growth ponderosa pine. The DEIS states on page 3-39 that "Commercial harvest in the 1960s removed mostly large diameter ponderosa pine, western larch and Douglas-fir." This can be assumed to have been largely what is considered by today's definitions as "old-growth."</p> <p>The majority of the trees to be removed in the proposed treatments are not</p>

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<p>Nowhere in the harvest history does it say that old trees or old growth have been cut down. Is that correct?</p> <p>iii. The DEIS at 3-42 says that commercial harvest has contributed to the loss of the mature old growth forests.</p> <p>1. So is the FS saying that they want to cut down even more trees because they cut down too many trees in the past?</p> <p>9. Fire History</p> <p>a. Some of the project area is in a moist lowland area. The DEIS at 3-38 claims that ponderosa pines are generally associated with warm-dry sites. How is it that the FS wants to create large open areas that contain ponderosa pines in moist lowland areas? The area doesn't seem to contain the correct habitat type for Ponderosa Pines.</p> <p>i. Does the forest Service really want to create large openings next to and inside of areas that contain ponds which provide habitat for a threatened plant species (Howellia Aquatilis)?</p> <p>10. Climate Change</p> <p>a. How has the FS looked at climate change in regards to wildfire potential, insect outbreaks, etc.</p> <p>b. Please speak to carbon sequestration and how logging releases carbon dioxide to the atmosphere, thereby intensifying global warming and subsequent wildfire activity.</p> <p>11. "It is horrible that we have to fight our own government to save the environment."</p>	<p></p> <p>←24</p> <p>←25</p> <p>←26</p>	<p>mature old-growth trees, but mostly smaller diameter understory trees.</p> <p><b>Response to Comment #24:</b> Refer to Responses to Comments #17 and #18.</p> <p><b>Response to Comment #25:</b> Refer to Response to Comments #19 thru #21.</p> <p><b>Response to Comment #26:</b> The proposed treatments would increase forest resiliency through the reduction of competition stress, providing for increased ability to adapt to climate change. This would also increase forest health, which would allow for increased photosynthesis, increasing the amount of greenhouse gases being taken up and stored. The treatments proposed would result in a reduction of potential emissions from wildfire.</p> <p>Forests and forest management are important influences on global warming (and vice versa). Forests help mitigate the effects of greenhouse gas emissions by removing carbon from the atmosphere and sequestering it in</p>

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<p>a. Ansel Adams</p> <p>Sincerely,</p> <p>/s/ John Meyer</p> <p><i>And on behalf of:</i> Michael Garrity Alliance for the Wild Rockies P.O. Box 505</p> <p><b>Helena, Montana 59624</b> 406-459-5936</p>		<p>biomass (King et al 2007). Scientists estimate that U.S. forests and harvested wood sequestered 162 Tg (or about 178 million tons) of carbon per year over the period 1990 through 2005. This rate of forest carbon sequestration offset approximately 10 percent of total U.S. CO<sub>2</sub> emissions from fossil fuels (Woodbury et al 2007). Management actions designed to maintain or restore forests to healthy and productive conditions are critical to maintain carbon stocks and sequestration rates. Significant increases in disturbance events, such as large, high-severity fires and major forest diebacks caused by drought stress, insects, or disease (Breshears et al 2005, Allen 2007) can release large amounts of carbon to the atmosphere and reduce carbon stocks for several decades (Field et al 2007).</p> <p>Management actions proposed for the Cooney McKay Project are designed to reduce the risk of high intensity fires and insect and disease mortality. Achieving these objectives would help maintain existing forest carbon stocks and carbon sequestration rates for decades.</p> <p>Another important implication of climate change is the potential affect of increased warming and modified precipitation regimes on forest ecosystems. The Intergovernmental Panel on Climate Change recently concluded that, as a result of climate change, it is very likely that North American forests will experience increased stress from insects, diseases, and increased risk of wildfire (Field et al 2007). Moreover, continuing increases in the frequency and severity of these forest disturbances in North America are likely to limit the ability of forests to sequester carbon (Field et al 2007).</p> <p>At the Regional Scale, scientists with the Climate Impacts Group at the University of Washington have found that over the last 100 years in the Pacific Northwest (including western Montana): average annual temperature has warmed by about 1.5° F (Mote 2003); mountain snow packs have been declining, especially at low elevations (Mote 2003); and spring runoff is occurring earlier in the spring season (Stewart et al 2004). Global climate models scaled to the Pacific Northwest project an increase in average temperature on the order of 0.2° to 1.0°F per decade through the 21<sup>st</sup> century with a best estimate average of 0.5° per decade (Mote et al 2005). Changes in annual precipitation are less certain. Most of the models analyzed project decreases in summer precipitation and increases in winter precipitation with little change in the annual mean (Mote et al 2005).</p> <p>These past and projected climate trends indicate that low elevation forests in western Montana are likely to continue to experience increased drought</p>

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		<p>stress that weakens trees and makes them more susceptible to insect and disease mortality. In addition, climate trends in the Pacific Northwest, and indeed throughout the much of the western U.S., suggest that the risk of high intensity wildfires will continue to increase (Westerling et al 2006, Running 2006).</p> <p>Treatments proposed by the Cooney McKay Project would help reduce the potential impacts to forest values resulting from increased drought stress, susceptibility to insect and disease events, and increased fire risk associated with projected changes in climate. In addition, proposed treatments may make the forests in the project area more resilient to these potential effects of climate change and may reduce the likelihood that major ecosystem elements, such as more fire tolerant vegetation, would be permanently reduced or lost due to high severity disturbances driven by climate change.</p>



Letter # C-73 – David & Virginia Holmes	#	Resource Area / Response
<p>From: Holmes, David R. Jr., M.D. [RO CAR]                      Sent: Sunday, December 16, 2007 09:37                      To: comments-northern-flatheadswan-lake@fs.fed.us                      Subject: Cooney McKay Project</p> <p>Dear Mr. Steve Brady.</p> <p>We have purchased 60 acres at 522 Holopeter Road, at mile marker 44. We believe that this is 9760A. We are building a log home on that property. We have looked over the information for the Cooney McKay Project. We have several concerns. We are not exactly sure where on the maps in the large binder material that you sent along that our property is. It seems to be contiguous with one of the parcels where there is going to be intense activity. That of course raises concerns.</p> <p>1. There are two streams that run through our property. They are not named. What will be the effect on the water in those two streams.</p> <p>2. It looks as if there will be a great deal of activity right next to our parcel of 60 acres.</p> <p>3. As we look at the project, there will be much less planting in Alternative 2, than there will be harvesting.</p> <p>4. What will the role of Plum Creek be. From what we can gather (by opinion only and what we can see), Plum Creek has been an incredibly IRRESPONSIBLE steward of the land. We however do not have data on this, but Plum Creek land seems to have been abused by the company with little regard for the consequences.</p>	<p>←1</p> <p>←2</p> <p>←3</p> <p>←4</p>	<p><b>Response to Comment #1:</b> Your property is located in Section 25 of Township 21 North and Range 16 West, which is adjacent to proposed treatment Unit 30-2 for the Cooney McKay Project. This unit totals 12 acres and is proposed as a Pre-Commercial Thin. This stand was clearcut in 1961 and is stagnating due to excessive tree densities. The Pre-Commercial Thinning treatment will reduce the tree densities by thinning trees by hand chainsaw and leaving a spacing of 17 x 20 feet between trees. Approximately 200 to 225 trees per acre will be left (ponderosa pine, western larch, Douglas-fir and lodgepole pine in that priority order) in the stand.</p> <p>There are no anticipated effects to any streams within the project area, due to the Design Criteria incorporated into the project specifically to protect water quality (Appendix 2 of the ROD, pages 2-6 through 2-7). Stream buffers of 50 feet on both sides of both streams located in the unit will be incorporated to further minimize the impacts. No treatment will occur within this 50-foot buffer.</p> <p><b>Response to Comment #2:</b> As discussed above, the only activity proposed adjacent to your property is Unit 30-2 that totals 12 acres and will be thinned by hand leaving 200 to 250 trees per acre.</p> <p><b>Response to Comment #3:</b> The majority of acres proposed for harvesting are treatments that retain much of the existing forested characteristics, and do not require planting to meet minimum stocking requirements. Only seed tree harvests would require planting to ensure stocking of desired species (ponderosa pine and western larch).</p> <p><b>Response to Comment #4:</b> Plum Creek Timber Company is a private industrial corporation with different management objectives than the Forest Service. They have the same role in the management of public lands as you or any other public individual or organization.</p>



Letter # C-75 – John Fraley, MT Department of Fish, Wildlife & Parks	#	Resource Area / Response
<p style="text-align: center;"><b><u>CONTACT SHEET</u></b></p> <p><b>John Fraley, 752-8506</b></p> <p>John Fraley called and left a message that he would like to discuss the Cooney McKay Project. I returned his call and we had the following discussion:</p> <p>Based on his local knowledge of the area from 20 years of hunting in Section 4, T20N, R16W, and Section 34, T21N, R16W (south of Cooney Creek), where treatment units are proposed, John has concerns about the effect of removal of thermal cover on white-tailed deer. The concern expressed dealt with the present condition in the surrounding area; Forest Service lands in Sections 4 and 34 are adjacent to private lands that have been extensively developed, including clearing of most of the forested area. This situation has caused white-tailed deer in the area to move higher up the slope in search of winter thermal cover. Due to the present situation and land ownership patterns, Sections 4 and 34 have become important white-tailed deer winter range habitat as evidenced by the large numbers of deer using this area during the winter months. John Fraley requested that the Forest Service consider maintaining denser thermal cover in this area to accommodate the heavier deer use in winter. He asks the USFS to defer all or some of the proposed units in this area.</p> <p>The units of particular concern to John Fraley were 4-86, 4-182, 4-185, and 4-186, in Section 4, and Units 34-178 and 34-180 in Section 34. We discussed how the proposed treatment would retain enough trees to provide thermal cover. John Fraley was still concerned, however, with disturbance of deer in the area and any reduction in thermal cover due to the observed use of white-tailed deer in this area.</p> <p>The conversation concluded with an agreement that I would discuss the situation with the Silviculturist and the District Ranger. We would specifically discuss which proposed treatment units could possibly be deferred.</p> <p>Documented by Jane Ingebretson District Wildlife Biologist</p>	<p>←1</p>	<p><b>Response to Comment #1:</b> Thank you for your comments.</p> <p>I have selected Alternative 3 with Modifications as the Selected Action. As compared to Alternative 3, <b>Alternative 3 – Modified</b> does includes the following:</p> <p>Defers treatment of Units 34-178, 34-180, 4-86, 4-186 in Sections 4 and 34 based on your winter range concerns for white-tailed deer. By not treating these units, disturbance to white-tailed deer is reduced and habitat is provided adjacent to private lands where deer have been displaced from traditional winter range.</p> <p>Alternative 3 - Modified meets Forest Plan direction for Big Game Winter Range and maintains thermal cover, while still accomplishing forest health, and fuels reduction objectives. The limited change affect to deer winter range, due to the nature of the prescriptions used, leaves the project area within Forest Plan standards even considering the effects of private harvest. This decision strikes a reasoned balance in meeting forest health objectives, while maintaining deer winter range. Most specifically, only about a 1 percent reduction in canopy cover will result in the project area within winter range. Forest Plan standards require that 50 percent of the forest within the winter range meet canopy requirements. As discussed in the DEIS on page 2-232, assuming no private lands provide thermal cover for winter range and assuming full implementation of the Meadow Smith Project and this project, the amount of thermal cover within the winter range would be 56 percent, which is still well above the Forest Plan standard. The standard was developed to be protective of overall thermal cover needs even if no thermal cover is provided on private lands.</p> <p>Most stands treated under the Selected Alternative will retain sufficient canopy cover to still function as thermal cover. Of the 751 acres treated mechanically, only 79 acres would be thinned to an extent where thermal cover requirements would not be met. These are the seed tree units where existing conditions in the lodgepole pine and Douglas-fir that comprise the bulk of the stands are on the decline due to a combination of insect mortality and disease such as root rot.</p> <p>With the approach taken, I believe the Selected Alternative is protective of winter range values, while still allowing appropriate silvicultural treatments based on site-specific stand conditions.</p>

