Draft Decision Notice for the
Moonlight Fire Area Restoration Project

USDA Forest Service
Mt. Hough Ranger District
Plumas National Forest
Plumas County, CA

Introduction
In July 2007, the Antelope fire burned approximately 23,000 acres. Over 13,000 of those acres burned with high fire severity. Two months later in September of 2007, the Moonlight Fire burned into the Antelope Complex consuming an additional 65,000 acres; of which 37,000 acres were burned by uncharacteristically high severity, stand-replacing fire. These two fires converted large portions of the landscape from forests dominated by long-lived conifer tree species (yellow pine, sugar pine, red fir, etc.) and characterized by frequent low severity fire regimes; to shrublands dominated by montane chaparral species (i.e. Ceanothus and Arctostaphylos species) with infrequent high severity fire regimes. Climate change, changing fuel dynamics and extreme fire behavior continue to put forested areas of the landscape at risk of comprehensive conversion to non-forest vegetation types.

The dramatic changes to the landscape from the fires also have impacted the fire area infrastructure.

- National Forest System trails in the area are being overgrown by shrubs and becoming impassable.
- Hazard trees continue to pose a safety risk for all users of National Forest Service lands.
- Many National Forest System roads were damaged by the fires and use during suppression activities.

The fire and associated loss of vegetation has altered the hydrology; with increasing runoff, peak flows, and flooding in post-fire precipitation events resulting in ongoing impacts to the fire area watersheds.

The Moonlight Fire Area Restoration Strategy (USDA Forest Service 2013, from here on referred to as “the 2013 Strategy”) was developed in 2013, as a result of our concern that post-fire conditions in the project area were impairing the resiliency of forest resources and infrastructure. The purpose of the strategy was to:

Provide a framework for restoration of natural resources, ecological processes, and human values affected by the Moonlight Fire. The overarching goal of restoration in the Moonlight Fire area is to maintain, create, and promote healthy and resilient systems, which may resemble the past, but are also better prepared for changing climates and human use patterns.

The Moonlight Fire Area Restoration Project was proposed to achieve the goals developed in the 2013 Strategy. The project includes a range of management activities designed to restore the area affected by the 2007 Moonlight Fire; to reduce the negative fire effects to vegetation, watersheds, and recreation; and to enhance resiliency to future fires, droughts, insect and disease infestations, and climate change. There are three key needs for the project:
- restore forest health, landscape diversity, and resiliency;
- restore watershed health, in particular reducing the impacts of roads on fire area watersheds; and
- maintain recreational opportunities that were affected by the fire, including trail maintenance.

These needs for action, objectives, and desired conditions are described in more detail in the environmental assessment on pages 8 to 16. To address these needs, we proposed vegetation restoration, fuel reduction, habitat protection, trail maintenance, and roadwork.

We prepared an environmental assessment that documents the analysis of three alternatives to meet the restoration needs and the no action alternative. Based on the results of the environmental assessment and finding of no significant impact, we determined that implementing the proposed project would not significantly affect the quality of the human environment and that preparing an environmental impact statement is not required.

**Decision**

I have reviewed and considered the Moonlight Fire Area Restoration Project environmental assessment, finding of no significant impact, and the supporting analysis and documentation included in the project record. Based upon my review of all the alternatives and the comments received from the public for this project, I have decided to implement alternative B, the proposed action, as described in the environmental assessment (pages 19-27, and appendices A, B, C, and D).

By implementing the selected alternative, we will restore vegetation conditions through thinning, aspen restoration, fuels reduction, and reforestation activities. We will also perform road maintenance where needed to conduct the vegetation management actions. Implementing the selected alternative will reduce the impact of system and non-system roads on watershed conditions by:

- decommissioning system routes and obliterating non-system routes that are no longer needed for management or public recreation purposes; and
- improving, reconstructing, and maintaining system roads in the project area that are needed for future management and public recreation.

In addition, the selected alternative includes trail maintenance and brush and hazard tree removal on project area non-motorized and motorized trails.

Table 1 summarizes our vegetation management and the associated treatment activities. Table 2 summarizes our transportation management activities. In order to reduce unintended effects we will implement standard management requirements and project-specific design criteria. Appendix D of the environmental assessment lists standard management practices and project-specific design features, which will minimize effects to natural resources and forest visitors.
Table 1. Summary of vegetation management actions proposed in the Moonlight Fire Area Restoration Project area

<table>
<thead>
<tr>
<th>Proposed Action</th>
<th>Activities</th>
<th>Approximate acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reforestation and release</strong></td>
<td>Grapple Pile, Pile Burn, Underburn, Reforestation, and release treatments (mastication, hand grubbing, and/or herbicide application).</td>
<td>4062</td>
</tr>
<tr>
<td><strong>Precommercial thinning</strong></td>
<td>Precommercial Mechanical Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>768</td>
</tr>
<tr>
<td><strong>Mechanical thinning</strong></td>
<td>Hand Thin up to 6 inch, Pile Burn, Underburn</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Hand Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>Hand Thin, Pile Burn, Underburn</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>1039</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Grapple Pile, Pile Burn, Underburn, Fence</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Grapple Pile, Pile Burn, Underburn, Manage and Monitor Livestock, Fence if necessary</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Hand Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>508</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Hand Thin, Grapple Pile, Pile Burn, Underburn, Manage and Monitor Livestock, Fence</td>
<td>9</td>
</tr>
<tr>
<td><strong>Aspen restoration</strong></td>
<td>Fence</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Grapple Pile, Pile Burn, Underburn</td>
<td>140</td>
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<tr>
<td></td>
<td>Grapple Pile, Pile Burn, Underburn, Reforest</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Hand fall large trees, Fence</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Hand Thin up to 6 inch, Pile Burn, Underburn</td>
<td>75</td>
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<td></td>
<td>Hand Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>1039</td>
</tr>
<tr>
<td></td>
<td>Mechanical Thin, Grapple Pile, Pile Burn, Underburn, Fence</td>
<td>6</td>
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<td></td>
<td>Mechanical Thin, Grapple Pile, Pile Burn, Underburn, Manage and Monitor Livestock, Fence if necessary</td>
<td>16</td>
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<td></td>
<td>Mechanical Thin, Hand Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>508</td>
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<td></td>
<td>Mechanical Thin, Hand Thin, Grapple Pile, Pile Burn, Underburn, Manage and Monitor Livestock, Fence</td>
<td>9</td>
</tr>
<tr>
<td><strong>Hazardous fuel reduction</strong></td>
<td>Hand Thin, Grapple Pile, Pile Burn, Underburn</td>
<td>230</td>
</tr>
<tr>
<td><strong>Wildlife habitat improvement</strong></td>
<td>Prescribed burning and hand Thin up to 6 inch and Pile Burn if needed</td>
<td>1404</td>
</tr>
<tr>
<td></td>
<td>Prescribed burning and Hand Thin/Pile Burn if needed</td>
<td>546</td>
</tr>
<tr>
<td><strong>Total Acreage</strong></td>
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<td>12,703</td>
</tr>
</tbody>
</table>

a - Treatment activities are defined on the following page. These treatments would occur in some combination over time and all activities may not be used on every acre or stand proposed for treatment. More detail regarding the types of treatments, sequences of treatments, and other considerations is included below.
Table 2. Summary of proposed transportation management activities

<table>
<thead>
<tr>
<th>Proposed Action</th>
<th>Approximate Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>System road decommissioning (currently designated for public motor vehicle use)</td>
<td>23</td>
</tr>
<tr>
<td>System road decommissioning (not currently designated for public motor vehicle use)</td>
<td>18</td>
</tr>
<tr>
<td>System trail decommissioning</td>
<td>0.15</td>
</tr>
<tr>
<td>Non-system route obliteration</td>
<td>14</td>
</tr>
<tr>
<td>System road improvements for water quality</td>
<td>55²</td>
</tr>
<tr>
<td>System trail improvements for water quality</td>
<td>29²</td>
</tr>
<tr>
<td>Haul Route Reconstruction</td>
<td>34²</td>
</tr>
<tr>
<td>Haul Route Maintenance</td>
<td>122²</td>
</tr>
<tr>
<td>Temporary Roads</td>
<td>7</td>
</tr>
</tbody>
</table>

- Approximately 40 miles of road would receive both system road or trail improvements for water quality and would have improvements for use as a haul road. These roads are counted twice in the table above. Roads would be maintained or improved for water quality purposes prior to use for timber hauling. After timber hauling they would be returned to their improved condition. In addition, some roads proposed for decommissioning or obliteration would first be used as haul routes, and then decommissioned after hauling activities were completed.

Reasons for the Decision

When compared to the other alternatives the selected alternative will best meet the purpose and need for action. By using design features and standard management practices, unwanted environmental effects are minimized and the alternative addresses the issues and public concerns. As documented in the finding of no significant impact in the environmental assessment, pages 190-193, this alternative meets the requirements of the National Forest Management Act, Endangered Species Act, Migratory Bird Treaty Act, Clean Water Act, Clean Air Act, National Historic Preservation Act, Executive Order 12898, other Forest Service regulations and policy, and state and local law.

Meeting the purpose and need

Forest health and diversity

The selected alternative will restore forest health and landscape diversity, and move the project area toward the desired condition of a forested landscape that is well-adapted and responsive to changes in climate and natural disturbance regimes. The treatments are consistent with the Sierra Nevada Framework, and are intended to increase forest diversity in species, structure, and seral stage in priority treatment units across the project area.

In the Moonlight project area, the areas prioritized for reforestation and release treatments were previously generally mid- to late-seral forests prior to the fire. High-severity wildland fires converted these areas to shrub-dominated habitats and early-seral forests. Mid- to late-seral forest vegetation is important in terms of landscape diversity and is a desired condition for the areas identified for reforestation through this project. The planting approach in this project should establish native conifer forest types at densities high enough to meet stocking levels, but low enough to create open canopied forested stands that compliment any natural regeneration that may occur; in addition to providing a more resilient structure for future fire management including prescribed fire in these stands. Release treatments after planting will be conducted with a mix of grapple piling, hand, and, where necessary to control competing vegetation, herbicides. Applying herbicides as a component of release treatments has been shown to improve outcomes for reforestation in northern and central California. Overall, the reforestation
of approximately 4,000 acres of burned area from shrub to conifer will establish a long-term seed source of desirable tree species.

Mechanical treatments will restore landscape diversity in terms of forest type, species diversity, forest structure, and forest age in stands that survived the fire. The goal of the precommercial thinning is to move younger forests (plantations) toward mid-seral forest and promote open-canopy late-seral stands in pine and dry-mixed conifer forests. In mature and early-seral forests (plantations), thinning by machine or chainsaw will reduce inter-tree competition, encouraging faster growth. Thinned trees will be removed from the stand if not needed to meet the requirements for down woody material. The direct effects of thinning will be increased stand and landscape level resiliency to fire, insects, and disease. Additionally, reducing stand densities will support healthy forest conditions during drought cycles.

Within aspen stands, we will reduce encroaching conifers and hazardous fuels. Combined with prescribed fire the selected alternative will increase aspen regeneration (suckering) and expand aspen clones or patches. This will increase the diversity of the landscape; sustaining and enhancing biological diversity, critical wildlife habitat, and scenic and hydrologic values of aspen.

The selected alternative will reduce fuel loading using prescribed fire and hand thinning in California spotted owl protected activity centers to decrease future wildlife severity and preserve long-term spotted owl habitat viability. By reducing surface and ladder fuels, the proposed action is intended to create conditions that would allow the use of prescribed fire as a primary management tool for these areas. Following 2004 Sierra Nevada Framework Record of Decision standards and guidelines, treated protected activity centers will remain suitable habitat. Temporary disturbance associated with activity will be reduced by using limited operating periods around spotted owl activity centers. The long-term effects of the selected alternative will be beneficial to individuals and their habitat by preventing stand-replacing wildfire and helping maintain habitat conditions on the landscape (environmental assessment page 127).

We will reduce hazardous fuels near residential developments. Reducing fuel loads will create stand conditions that do not support crown fires, except under extreme weather conditions (drought, wind, etc.). If wildland fires do occur, the reduced fuel loading is anticipated to support only ground fire, which is generally low severity.

See the environmental assessment pages 46 to 59 for more detailed analysis of how the proposed action meets the purpose and need for forest restoration.

Watershed restoration
A need was identified for this project to decommission unneeded National Forest System roads, to obliterate non-system roads, and to maintain system roads so that road-related soil erosion and associated sedimentation rates are reduced, and to improve transportation infrastructure and decommission unneeded infrastructure. The selected alternative will improve road drainage at locations on National Forest System roads and off-highway vehicle (OHV) trails that are currently causing substantial sediment delivery. These improvements will, restore soil infiltration and productivity and provide long-term beneficial outcomes including reducing road-generated sediment impacts to streams, and lowering the potential for drainage structure failure. As such, road and trail improvements will also benefit aquatic wildlife.

Both decommissioning and obliterating will eliminate road traffic; which will reduce runoff and sediment delivery benefiting aquatic and terrestrial wildlife species and reducing the probability of invasive species spreading within these areas.
Ultimately, the selected alternative will provide for safe public access while reducing impacts to water, soil, and ecological functions.

**Recreation**

The selected alternative will improve trail conditions by reducing the dense shrub growth that is currently obstructing the trails, and by removing hazard trees. In addition, implementing the proposed vegetation treatments adjacent to the trails will reduce the risk of severe wildfire impacting the trails in the future.

Overall, the road and trail conditions across the project area will improve due to the improvements for water quality on 55 miles of system road and 29 miles of system trail; and reconstruction on 36 miles, and maintenance on 124 miles of haul route. Proper construction and maintenance of roads and trails within the project area will provide long-term benefits by providing access to dispersed recreation, and reducing maintenance costs over time.

The selected alternative will also decommission unneeded roads and obliterate non system routes, potentially reducing opportunities for visitors who use the 22 miles of system roads that are currently designated for public use. However, many of the roads proposed for decommissioning are not in a useable condition.

**Addressing issues and public concerns**

**Herbicide Use**

I understand the concerns submitted in public comments regarding the potential risks of using herbicides for the proposed reforestation treatments. Therefore, we are proposing herbicides because past experience and research has shown they are needed to achieve our purpose and need. They will be used as part of an integrated release treatment that also includes grapple piling and hand grubbing. Herbicide use will follow label requirements, law, regulation, policy, best management practices, and design features to reduce risk to human health, water quality, and wildlife.

I considered an alternative that did not use herbicides (see alternative D below), but I have determined that the benefits of herbicide use for the reforestations objectives outweigh the minimal risks posed by our careful and controlled use of herbicides.

See the Response to Comment appendix for further response to public comments related to herbicide application.

**Motorized access**

Commenters also expressed concern that motorized access for recreation, vegetation management, and other purposes would be eliminated under the proposed action. I acknowledge that there will be approximately 22 miles of system road decommissioned under the selected alternative. The road decommissioning is necessary to meet the need for improved water quality. The selected alternative implements some of the recommendations of the Forest’s 2016 Travel Analysis Report to remove unneeded roads from the system and to move towards a more sustainable road system. The selected alternative will also improve road conditions throughout the project area, providing a safe and effective transportation system where it is sustainable to do so and best supports management objectives.

See the Response to Comment appendix for further response to public comments related to motorized access.
Other Alternatives Considered
In addition to the selected alternative, I considered three other alternatives.

No Action
Under the no-action alternative, current management plans would continue to guide our management of the project area. Current project area trends would continue and the goals and objectives of the 2013 Moonlight Fire Area Strategy would not be achieved. I did not select the no-action alternative because it does not meet the needs identified for the project to restore forest health, improve watersheds, and maintain recreational trails.

Reforestation actions are necessary because relying solely on natural regeneration does not ensure achieving the desired condition (density, species and arrangement) of forest cover within the next several decades. Through reforestation, managers can better control density, spacing and species composition versus solely relying on natural regeneration.

The no-action alternative would not decommission, obliterate or reconstruct any of the roads within the project area. Sediment would continue to be delivered to adjacent watercourses (hydrology report, (pgs. 19-20). Public access to roads and trails would not be improved.

Alternative C – California Spotted Owl Alternative
In 2015 the Regional Office issued Draft Interim Recommendations for the Management of California Spotted Owl Habitat on National Forest System Lands (USDA Forest Service 2015a). Alternative C, described in more detail in the environmental assessment (pages 27 to 28), was designed to comply with Regional Forester direction to “include and analyze an alternative consistent with these interim recommendations for any environmental impact statement or environmental assessment prepared for site-specific, vegetation management projects within the range of the CSO [California spotted owl] on the Sierra Nevada National Forests.” The goals set forth in the Interim Recommendations are consistent with the overall goals for the Moonlight Fire Area Restoration project. The recommended management activities outlined in the Interim Recommendations are more restrictive than the selected alternative. To comply with the Interim Recommendations, alternative C would implement all of the actions described in the proposed action, however, there would be limits on mechanical treatments within specific “designated habitat” acres. Approximately 700 acres of proposed mechanical treatment would change to hand treatment only on this alternative. In addition, approximately 600 acres of proposed hand thinning up to 10 inches diameter at breast height, would change to hand thinning up to 6 inches diameter at breast height. There would be some minor reductions in need for haul route maintenance and reconstruction and temporary road construction.

Overall, there would be fewer acres meeting the purpose and need for restoring forest diversity and stand structure and for restoring aspen. Though, there would be more acres that would meet the need for wildlife habitat improvement, the wildlife habitat improvement treatments would reduce the amount of fuel reduction in areas surrounding protected activity centers. I did not select this alternative because, though these lighter treatments will have fuels and fire behavior benefits, they will also carry more relative risk of habitat loss or degradation under severe fire weather scenarios. Additionally, these treatments would be short-lived in their effectiveness and most likely require re-entry sooner.

Alternative D – Reforestation without the use of herbicides
This alternative would be the same as the selected alternative, except that there would be no herbicides used for the release treatments. Release treatments would include machine pulling and piling, mastication,
or hand grubbing only. This alternative was analyzed in response to public concerns about the potential effects of herbicides.

I did not select this alternative because I feel the benefits of herbicide use as part of an integrated release treatment outweigh the minimal potential risks to human health, water quality and wildlife from the careful and controlled use of herbicides. Our research and previous experience with reforestation in the project area shows that reforestation is unlikely to be as successful at restoring forested lands and a future seed source without the use of chemical herbicides (see environmental assessment pages 60-61 for more information).

**Alternatives considered, but eliminated from detailed study**

Federal agencies are required to rigorously explore and objectively evaluate all reasonable alternative actions and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments we received in response to the proposed action provide suggestions for alternative methods for achieving the purpose and need. Some of these alternatives are outside the scope of the need for the proposal, duplicative of the alternatives we considered in detail, or are components that would cause unnecessary environmental harm. Therefore, we have considered a number of alternatives, but eliminated them from detailed study for the reasons described on environmental assessment pages 28-29.

Public comments received after the publication of the environmental assessment recommended alternatives to the use of herbicides, including organic alternatives or use of a pilot grazing project. We are not aware of any organic method that can replace the herbicides we have proposed. We had previously considered, but eliminated the use of grazing for reforestation in the environmental assessments. Further rationale for not considering the use of organic treatments or grazing in more detail can be found in the Response to Comment appendix.

**Public Involvement and Scoping**

The project was first listed on the Plumas National Forest Schedule of Proposed Actions in spring of 2016. We solicited public comments for the Moonlight Fire Area Restoration Project scoping period from August 10 through September 30, 2016; and posted supplemental legal notices in the Feather River Bulletin and Portola Reporter on August 10, 2016, and in the Lassen County Times on August 9, 2016. On September 13 and 15 we hosted public information meetings in local communities to share information about the project with interested members of local communities. Approximately 40 individuals signed in to these meetings. We used the comments received as part of the scoping period to develop the issues and alternatives (described above) that we analyzed in the environmental assessment.

We released the environmental assessment for the Moonlight Project on October 24, 2017. Legal notices of the opportunity to comment were posted in the Feather River Bulletin and Portola Reporter on October 25, 2017, and the Lassen County Times on October 24, 2017. The notices consisted of a description of our proposed action and request for public comments, and an internet link to access the project environmental assessment. We also mailed and emailed a letter containing similar information to a mailing list of those who have previously expressed interest in the project and representatives for federally-recognized tribes.

The Responsible Official received written comments from one organizations and four individuals during the 30-day comment period. Responses to these comments are provided in the Response to Comment appendix.
Finding of No Significant Impact
After considering the environmental effects described in the environmental assessment and specialist reports, and considering the Finding of No Significant Impact on pages 186-193 of the environmental assessment, I have determined that the selected alternative (alternative B) will not have significant effects on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared.

Findings Required by Other Laws and Regulations
I find that this project is consistent with the standards and guidelines for land management activities described in the 1988 Plumas National Forest Land and Resource Management Plan as amended by the 2004 Sierra Nevada Forest Plan Amendment Final Supplemental Environmental Impact Statement and Record of Decision. Therefore, this project is consistent with the requirements of the National Forest Management Act of 1976 (environmental assessment page 190). In addition, the Project complies with the Endangered Species Act (environmental assessment page 191), the Clean Water Act (environmental assessment page 192), the Clean Air Act (environmental assessment page 192), the National Historic Preservation Act (environmental assessment page 192) and other federal, state, and local laws or requirements imposed for the protection of the environment (environmental assessment page 190-192).

Administrative Review and Objection Rights
This draft decision is subject to the objection process pursuant to 36 CFR 218 Subparts A and B.

Eligibility to File Objections
Objections will be accepted only from those who have previously submitted specific written comments regarding the proposed project either during scoping or other designated opportunity for public comment in accordance with § 218.5(a). Issues raised in objections must be based on previously submitted timely, specific written comments regarding the proposed project unless based on new information arising after designated opportunities.

Individual members of organizations must have submitted their own comments to meet the requirements of eligibility as an individual, objections received on behalf of an organization are considered as those of the organization only. If an objection is submitted on behalf of a number of individuals or organizations, each individual or organization listed must meet the eligibility requirement of having previously submitted comments on the project (§ 218.7). Names and addresses of objectors will become part of the public record.

Contents of an Objection
Incorporation of documents by reference in the objection is permitted only as provided for at §218.8(b). Minimum content requirements of an objection are identified in (§ 218.8(d) include:

- Objector’s name, address, and telephone number if available; with signature or other verification of authorship supplied upon request;
- Identification of the lead objector when multiple names are listed, along with verification upon request;
- Name of project, name and title of the responsible official, national forest/ranger district of project;
• Sufficient narrative description of those aspects of the proposed project objected to, specific issues related to the project, how environmental law, regulation, or policy would be violated, and suggested remedies which would resolve the objection; and,

• Statement demonstrating the connection between prior specific written comments on this project and the content of the objection, unless the objection issue arose after the designated opportunity(ies) for comment.

Filing an Objection
Written objections, including any attachments, must be filed (regular mail, fax, email, hand-delivery, or express delivery) with the Reviewing Officer Randy Moore, Regional Forester, c/o Nevia Brown, Regional Appeals and Objections Coordinator, 1323 Club Drive, Vallejo, CA 94592, fax 707-562-9229, within 45 days following the publication date of the legal notice in the newspaper of record, The Feather River Bulletin. The office business hours for those submitting hand-delivered objections are: 8:00 AM to 4:00 PM, Monday through Friday, excluding holidays. Electronic objections must be submitted in a format such as an email message, portable document file (.pdf), plain text (.txt), rich text format (.rtf), and Word (.doc or .docx) to: objections-pacificsouthwest-regional-office@fs.fed.us.

Please put Moonlight Fire Area Restoration Project in the subject line of the message. It is the responsibility of Objectors to ensure their objection is received in a timely manner (§ 218.9).

The publication date in the Feather River Bulletin, newspaper of record, is the exclusive means for calculating the time to file an objection of this project. Those wishing to object to this proposed project should not rely upon dates or timeframe information provided by any other source.

Implementation
If no objections are filed within the 45-day time period, implementation of the decision may occur on, but not before, five days following the close of the objection filing period. When objections are filed, implementation may occur following the issuance of the Review Officer’s letter and once any instructions are addressed.

For further information concerning the Moonlight Fire Area Restoration Project, contact Kyla Sabo, kylasabo@fs.fed.us, or 530-283-7652 during normal business hours.

Approved by:

DRAFT DECISION – NO SIGNATURE

Daniel Lovato
Forest Supervisor
Plumas National Forest

Date
References


USDA Forest Service. 2004b. Record of Decision Sierra Nevada Forest Plan Amendment. USDA Forest Service Pacific Southwest Region, Vallejo, CA.


Appendix A – Response to Public Comments for the Moonlight Fire Area Restoration Project

Introduction
The following sections display the Forest Service responses to public comments on the Moonlight Fire Area Restoration Project Environmental Assessment (Moonlight Project) released in October 2017. The Council on Environmental Quality (CEQ) regulation 40 CFR 1503.4 states that an agency preparing a final environmental assessment shall assess and consider comments both individually and collectively. This document includes (1) a table listing the name and location of the commenter, the organization or entity each commenter represents, and the date of comment, and (2) relevant comment statements organized by topic as presented in chapter 3 of the environmental assessment, and (3) Forest Service responses.

Summary of Public Involvement

Scoping Period
The project was first listed on the Plumas National Forest Schedule of Proposed Actions in spring of 2016. We solicited public comments for the Moonlight Fire Area Restoration Project scoping period from August 10 through September 30, 2016; and posted supplemental legal notices in the Feather River Bulletin and Portola Reporter on August 10, 2016, and in the Lassen County Times on August 9, 2016. On September 13 and 15 we hosted public information meetings in local communities to share information about the project with interested members of local communities. Approximately 40 individuals signed in to these meetings. Comments received as part of the scoping period were utilized to develop the issues and alternatives that were analyzed in the environmental assessment (see pages 17-18 of the environmental assessment).

30-day Public Comment Period
The environmental assessment for the Moonlight Project was released on October 24, 2017. Legal notices of the opportunity to comment were posted in the Feather River Bulletin and Portola Reporter on October 25, 2017 and the Lassen County Times on October 24, 2017. The notices consisted of a description of our proposed action and request for public comments, and an internet link to access the project environmental assessment. We also mailed and emailed a letter containing similar information to a mailing list of those who have previously expressed interest in the project and representatives for Federally-recognized tribes.

The Responsible Official received written comments from one organizations and four individuals during the 30-day comment period. Table 3 lists the commenters and the letter number(s) associated with the commenters.

Table 3. List of commenters on the Moonlight Fire Area Restoration Project Environmental Assessment

<table>
<thead>
<tr>
<th>Letter Number</th>
<th>Commenter Name</th>
<th>Organization/Affiliation</th>
<th>Date Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dick Artley</td>
<td></td>
<td>11/11/2017</td>
</tr>
<tr>
<td>2</td>
<td>Richard Egan</td>
<td></td>
<td>11/20/2017</td>
</tr>
<tr>
<td>3</td>
<td>Jay Feldman</td>
<td>Beyond Pesticides</td>
<td>11/21/2017</td>
</tr>
<tr>
<td>4</td>
<td>Elisa Adler</td>
<td></td>
<td>11/22/2017</td>
</tr>
<tr>
<td>5</td>
<td>David and Mia Van Fleet</td>
<td></td>
<td>11/24/2017</td>
</tr>
</tbody>
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Response to Comments

Each individual comment with each letter was reviewed and assigned a topic and a comment number (e.g. comment number 3-1 is the first comment from letter 3). We grouped comments stating similar concerns. Under each topic below we have provided a summary concern statement and then quote the individual comments as bulleted items. In some cases, quotes were abbreviated or paraphrased slightly to focus on the most relevant aspects of the comment and the full comment is incorporated by reference. A response is provided for each group of similar comments.

Possible responses are to:

1. Modify alternatives including the proposed action,
2. Develop and evaluate alternatives not previously given serious consideration by the agency,
3. Supplement, improve, or modify the analyses,
4. Make factual corrections,
5. Explain why comments do not warrant further agency response.

Comments are not relevant if they are: beyond the scope of the proposal, unrelated to the decision being made, already decided by law or policy (or Forest Plan), conjectural in nature or not supported by scientific evidence; or, general in nature or position statements. We did not provide responses to these types of comments.

A complete copy of each letter received is available in the project record, hereby incorporated by reference.

Access, Recreation, and Transportation

Concern – In the environmental assessment, Forest Service analysts should consider that decommissioning roads would remove important access.

- “The project as described proposes to destroy valuable public resources including many expensive improvements. These include bridges and roads that provide important corridors for the movement of livestock, wildlife, hunters, woodcutters and recreationalists. Due to the USFS lack of ability to manage its financial resources, once destroyed they are highly unlikely to ever be replaced” [2-1]
- “Further destruction of roads, coupled with the agencies policy of not maintaining existing roads will compound the difficulty to manage my grazing allotment, restrict the agency from battling fires,” [2-2]
- “Particularly the destruction of portions of 28n19 will result in the elimination of the only passage over Indian Creek for a distance of approximately 5 miles. This will significantly impact the ability of livestock to utilize large portions of the Lone Rock and Antelope grazing allotments. It will also impede the management of those allotments to the point of possibly making them not financially feasible to operate. The same issues to a slightly lesser degree will be created on 27n09a, 28n15b, 27n09e.” [2-4]

Response

The proposed action and action alternatives include road decommissioning activities to meet the purpose and need for improving watershed health. While it is recognized that past investments by the Forest Service and other entities developed these roads to access and utilize natural resources, the management
conditions today are very different. In particular, the fire has resulted in a major transition of vegetation communities and hydrology. As stated in the environmental assessment on page 14, roads that are not properly maintained or were originally constructed with insufficient drainage have the potential to cause profound impacts to streams. This has been found to be especially true for roads that were damaged by the Moonlight fire and subsequent flooding.

Subpart A of the Travel Management Rule (36 CFR 212) requires the agency to identify a minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. It requires the use of a science-based roads analysis at the appropriate scale to determine the minimum road system. The rule was designed, in part, to better manage funds available for construction, maintenance, and reconstruction of national forest system roads. In compliance with subpart A, the Plumas National Forest conducted a systematic travel analysis process (referred to as TAP) in 2016 (USDA Forest Service 2016). According to the report, “the ultimate goal of the TAP is management and sustainability of a road system that minimizes adverse environmental effects by assuring roads are in locations where they are necessary to meet access needs and can be maintained within budget constraints… The Forest has an obligation to provide safe and efficient access for many different types of use, through its routine road operations and maintenance of this road system. The Forest also has obligations to protect the natural and cultural resources under its care, and to spend the public’s tax dollars wisely. Balancing these obligations with decreased funding and increasing demands from users is a significant challenge. This balancing challenge is the heart of the Travel Analysis Process” (USDA Forest Service 2016). The travel analysis considered benefits and risks of each road associated with terrestrial and aquatic species; watershed conditions, the spread of undesirable exotic species; fire management activities and escape routes; air pollution; administrative access and cost of maintenance; public use and access; socioeconomics, including support of commodity production; recreation; and cultural resources. The final result of the analysis was a determination of whether or not each national forest system road was likely needed for future management. These travel analysis determinations were not decisions, but rather are meant to inform future management decisions, such as the Moonlight project.

The proposed action for road decommissioning was developed based on field review and identification of specific watershed effects on damaged or problematic roads within the project area. It also, in part, implements the recommendation of the forestwide travel analysis process. Based on site-specific review of these roads, we have determined that the costs to maintain or improve these roads to a point that they no longer pose a risk to watersheds is not justified by the need for the road. Many of the roads proposed for decommissioning have already been in an unusable condition for a number of years and therefore, receive limited to no public use at this time. The cost of maintaining all of the project area roads is not sustainable given agency budgets, especially given post-fire conditions and impacts to infrastructure.

At the same time, our purpose and need also includes maintaining or improving roads within the project area to reduce watershed effects and improve access. Our review of the roads also identified numerous roads within the project area that are needed for future use and would be maintained or improved under this proposed action (approximately 80 miles of system road and trail). Additional miles would be maintained because they will be used for haul routes for the vegetation management proposal. Other project area roads will also be maintained or improved as part of the recent Hungry Creek Watershed Restoration Project and The Indian Creek Watershed Road Maintenance and Smith Creek Stream Restoration Project, which are anticipated to be implemented in 2018 to 2019. While we acknowledge that the proposed action would reduce access to some specific areas, overall, the project would improve

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1 The 2016 Plums National Forest Travel Analysis Report is available on the following website: https://www.fs.usda.gov/detail/plumas/home/?cid=stelprdb5211065
long term access in the project area and provide for management, recreation, grazing, fire suppression, and other purposes (see environmental assessment page 169).

One commenter is specifically concerned about access for his grazing activities on the following roads which are proposed to be decommissioned: 28N19, 27N09a, 28N15b, 27N09e. It should be noted that this proposal to decommission reduces motorized access for the general public. Access for grazing permittees is managed separately through grazing permits and annual operating plans. Reasons for the proposed decommissioning of the listed routes is as follows:

- We propose decommissioning the final 1.63 miles of system road 28N19 and removing the Indian Creek crossing. In its current state 28N19 is not safely passable on either side of this stream crossing and there is a large landslide at mile post 3.1 (see figure 1 and figure 2). The purpose of removing this crossing is to reduce the impacts from a very unsustainable road that is prone to failure. It should be noted that removing the crossing, though it would eliminate one motorized access route, would not limit access by cattle through this area, as a grazing animal can easily cross the stream. Motorized access across Indian Creek will remain open at 28N17 (very near Browns Cabin) which is 2.2 miles downstream and at 28N15 which is 2.8 miles upstream. Both of these alternative routes would be reconstructed as part of the proposed action.

- We propose decommissioning 27N09A (0.35 miles) because this route encourages motorized incursions into a meadow. It was determined to be ‘not likely needed’ in the 2016 forestwide Travel Analysis Report Appendix B.

- We propose to decommission 27N09E (1.33 miles) because the road is a rarely used, unmaintained spur that dead ends near Fant Creek.
• On 28N15B we propose to decommission 1.37 miles of system road because it is part of a longer loop route that is already decommissioned. The proposed action would remove culverts that were left after previous decommissioning actions to further restore watershed conditions. The proposed action would leave the initial 0.1 miles of system road open to access a gravel pit.

Concern – In the environmental assessment, Forest Service analysts should consider that decommissioning roads will result in development of illegal roads.

• Further destruction of roads, coupled with the agencies policy of not maintaining existing roads will … result in environmental damage as forest travelers make their own roads in order to access public land. Analysis of the impacts of promoting, or mitigating these illegal roads has not been addressed in the proposed action. [2-3]

Response
Although there are potential impacts to visitors who enjoy using specific roads proposed for decommissioning or obliteration, there would be no overall loss of access for recreation because there is an adequate network of national forest system roads designated for use. Alternatives B, C, and D include many more miles of system road and trail improvements for water quality, haul route reconstruction, and haul route maintenance. These proposed actions would improve road conditions and access throughout the project area. Best management practices and standard management practices would ensure road closures are constructed in a way that would limit potential for illegal use (environmental assessment page 263 and 274). If it were to occur, unauthorized, user created routes, or motorized vehicle travel on routes that are not designated for public use on the Plumas Motor Vehicle Use Map would be addressed as a law enforcement issue.

Herbicide Use

Concern – In the environmental assessment, Forest Service analysts should consider that the herbicides proposed are toxic to wildlife, aquatics, and humans; and may impact watersheds.

• “Please do not apply herbicides that contain glyphosate to public land as you are planning. Glyphosate kills and maims most living things … birds, fish and mammals (including humans).” [1-84]

• “You all knew glyphosate is highly toxic, otherwise you would have been up-front with the public and not hidden the names of the chemicals you plan to spray.” [1-85]

• “The herbicides glyphosate and triclopyr, intended for use in proposed action B, have been linked to a range of costly health and environmental impacts.1 [FOOTNOTE 1: Beyond Pesticides. 2016. Gateway on Pesticide Hazards and Safe Pest Management. http://www.beyondpesticides.org/resources/pesticide-gateway?]” [3-3]

• “My family lives in the watershed that was negatively impacted by the Moonlight Fire, that will be negatively impacted again if the Forest uses herbicides in its attempt at reforestation in the burned are.” [4-1]

Response
The Plumas National Forest is committed to using an integrated approach to reforestation and chemical treatment has only been proposed where other methods are deemed ineffective and infeasible. The proposed reforestation and release treatments would utilize non-herbicide tools such as machine pulling,
mastication, and hand grubbing. However, herbicide use is also proposed because past experience has shown that the non-herbicide treatments alone may not yield sufficient regeneration to meet the reforestation objectives. The proposed action clearly states the types and amounts of herbicides we plan to use. This includes glyphosate and triclopyr, which would be used for release treatments to enhance seedling survival in some locations (see page 22-23, of the environmental assessment). Herbicide application includes only a radial application of up to 5-7 feet surrounding planting sites using a backpack sprayer; therefore, only a portion of the reforestation acres directly surrounding planted trees will be treated with herbicide to minimize negative effects of herbicide use, we would follow applicable state regulations, label directions, and Forest Service policy. In addition, the standard management practices and project-specific design features from appendix D would be followed, including timing restrictions and buffers on aquatic habitats.

The environmental assessment analyzes the effects of the proposed herbicide use on sensitive species (including birds and mammals (123-126, 133, 139) and aquatic species (147-150)), human health (152-161), and water quality and watersheds (101-102). In response to scoping comments, the environmental assessment also analyzes an alternative that does not include the use of herbicides for the release treatments.

The human health risk assessment for this project examines the potential health effects on all groups of people who might be exposed to any of the pesticides that are proposed for use in this project. This risk assessment is summarized in the environmental assessment on pages 152-161 and the full report is available in the project record and has been posted on the project website. The project-specific risk assessment characterizes risk to the general public, including scenarios involving sensitive groups such as children to identify risks associated with the project to inform the decision, and to identify where project design criteria may be warranted to minimize risk. Under normal conditions, members of the general public would not be exposed to substantial levels of these herbicides due to project design features which are aimed at reducing the risk of exposure. Project design features such as including buffers limiting members of the public from entering these areas during pesticide application, and posting signs around treatment areas and addition of colorant would provide warning to the public that an area is being or has recently been treated.

Pesticide applicators are the individuals most likely to be exposed to a pesticide during the application process. For all pesticides proposed for use in this project pesticide application would be consistent with the Forest Service Pesticide Use Policy, and would be in compliance with state and federal regulations. Additionally, it would follow USDA Forest Service Region 5 Best Management Practices for Water Quality and Vegetation Manipulation and the USDA Forest Service Region 5 supplement No. 2100-95-1 to 2150 on Pesticide-Use Management and Coordination. Appropriate monitoring protocols would also be used to ensure the proposed pesticides are applied according to requirements and label specifications. Additional project design criteria is listed in the Moonlight Fire Area Restoration Environmental Assessment Appendix D (page 273 and 279-282).

We would minimize or eliminate risk to groundwater and surface water by adhering to several best management practices (page 264 of the environmental assessment), standard management practices (page 273), and project-specific design features that reduce the risk of ground and surface water contamination (page 278-279). Measures to protect watershed effects from herbicides include selection of agents with low runoff potential due to soil binding, establishment of no-application buffers along water ways, restriction of herbicide application to the dry period of year when runoff rates are very low, and restrictions of herbicide application when precipitation is forecast. Herbicide runoff to streams and waterbodies is not expected with the project (page 107).
In response to the initial public comments received during scoping, we considered alternative D in detail to compare the effects of proposed herbicides with an alternative that does not use herbicides. The effects analysis in chapter 3 of the environmental assessment shows that alternative D would result in fewer potential negative effects to project area resources including: water (page 106), soil (page 96), wildlife (page 141-142), or human health (pages 161 and 172). However, alternative D would result in less effective reforestation treatments when compared to alternatives B and C, because without herbicides, the tools available to control shrub competition would not be effective enough to meet reforestation goals (as described on pages 60-61 of the environmental assessment).

Concern – In the environmental assessment, Forest Service analysts should further consider how herbicides may impact groundwater and are toxic to aquatic species, including endangered species.

- “Both triclopyr and imazapyr have been detected in groundwater and are considered toxic to aquatic organisms.2 [FOOTNOTE 2: Ibid.]” [3-4]

- “While the current Moonlight Fire Area Restoration Project #49421 Environmental Assessment (EA) analyzes potential impacts to terrestrial plants and animals, we believe that potential impacts to Endangered Species Act listed animals, particularly aquatic animals such as the Sierra Nevada yellow-legged frogs, are significant, warranting further evaluation from USFS. Although the EA states that best practices and certain buffer zones will be employed, glyphosate in particular is currently under evaluation by the U.S. Fish and Wildlife Service for its potential impacts to 1,500 endangered species. We believe it is prudent for USFS to wait on the full evaluation of the potential impacts of this chemical to endangered plants and animals in the U.S. before moving forward with regular use of the chemical in areas where a number of listed species currently find habitat.8 [FOOTNOTE 8: Center for Biological Diversity V US Department of Interior et al. CASE NO #:13-cv-658-JCS, https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/Pesticides-Settlement_2_19_2016.pdf.]” [3-8]

Response

The proposed action does not include the use of the herbicide imazapyr. We have reviewed the reference provided in the comment to the Beyond Pesticides website which state that triclopyr has been detected in groundwater, however, it does not provide any context or data related to where this occurs or how it might be applicable to this project. We do recognize that, in general, there are some risks to water quality and groundwater involved in use of herbicides. Therefore, where triclopyr and glyphosate are proposed for application we would minimize or eliminate these risks by adhering to several best management practices (page 264 of the environmental assessment), standard management practices (page 273), and project-specific design features that minimize the risk of ground and surface water contamination (page 278-279). Herbicide runoff to streams and waterbodies is not expected with the project (page 107). As stated in the finding of no significant impact, “potential effects of the proposed action, either through surface runoff of sediment and chemicals or chemicals entering water bodies through groundwater sources do not constitute a significant degradation of quality or impair existing beneficial uses” (environmental assessment page 192).

Effects to special status aquatic species from all project actions, including herbicide use, were analyzed in the aquatic wildlife specialist report. A biological assessment was produced to address effects to the one federally listed species (Sierra Nevada yellow-legged frog) located within the analysis area. The project has undergone consultation with U.S. Wildlife Service. The determination of “may affect, likely to adversely affect” the Sierra Nevada yellow-legged frog was based on the effects from non-herbicide
actions (e.g., road work, prescribed fire). The determination for herbicide use was “no effect” based on the following protective measures:

- At minimum, suitable habitat includes the area within 82 feet of water; buffering this area by an additional 25 feet establishes an aquatic habitat buffer that exceeds 100 feet. Based on water monitoring done in the Sierra Nevada and elsewhere, and based on available research, a vegetated buffer of 100 feet is a cautious approach to preventing water contamination at levels of biological significance for the herbicides currently in use.

- Back-pack type sprayers used in these applications are operated at low pressures and using spray nozzles that in combination result in relatively uniform and large droplets.

- Drift away from the application area is managed through the use of best management practices such as instituting unsprayed buffer zones, wind restrictions, pressure restrictions, and specifying nozzle type, and height of nozzle above target vegetation.

- Assuming best management practices are in place and followed, including a buffer of at least 25 feet, the application of these herbicides to the foliage of target plants using back-pack sprayers should not result in mortality of non-target plants off-site.

- Employing a buffer of 25 feet should prevent any indirect effects to plants and amphibians through movement in surface or subsurface water.

As stated in the finding of no significant impact (environmental assessment page 190), the U.S. Fish and Wildlife Service provided a biological opinion that the project was not likely to jeopardize the continued existence of the Sierra Nevada yellow-legged frog or destroy or adversely modify critical habitat. New information regarding effects to sensitive species would be considered following the requirements for consideration of new information found in Forest Service Handbook 1909.15 Section 18.

Concern – In the environmental assessment, Forest Service analysts should further consider how herbicide use will impact soils, soil microbes, and soil organisms.

- “Herbicide use has the potential to cause detrimental impacts to soil-dwelling microbes. The use of the herbicide glyphosate, for example, has the potential to contaminate soil and negatively alter soil microbial diversity.5 [FOOTNOTE 5: Kremer, Robert. 2017. Soil and Environmental Health after Twenty Years of Intensive Use of Glyphosate. Medracev. (6)(5). https://medracevonline.com/APAR/APAR-06-00224.pdf.] Glyphosate use also harms beneficial soil organisms like earthworms.6 [FOOTNOTE 6: Gaupp-Berghausen, Malin et al. 2015. Glyphosate-based herbicides reduce the activity and reproduction of earthworms and lead to increased soil nutrient concentrations.] Studies find that soil microbial diversity is the basis for the proper functioning of valuable ecosystem services, including nutrient cycling, carbon fixation, soil aeration and stabilization.7 [FOOTNOTE 7: Delgadi-Baquerizo, Manuel. 2016. Microbial diversity drives multifunctionality in terrestrial ecosystems. Nature Communications. 10.1038/ncomms10541. http://www.nature.com/ncomms/2016/160128/ncomms10541/full/ncomms10541.html.]” [3-7]

Response
Effects of herbicide use on soils are considered on pages 92-93 of the environmental assessment.

Soil microbial populations and diversity are important to soil function and productivity as referenced by the commenter in Delgadi-Baquerizo 2016 and the analyses in the environmental assessment do not dispute that. The scientific literature, as referenced in the environmental assessment (pages 92 and 93), has come to a consensus that the use of glyphosate has short-term effects to microbial populations and
diversity, with quick rebound times after applications within forested environments. Long-term effects of the use of glyphosate have not been found (Busse et al. 2001; von Merey et al. 2016). The article referenced by the commenter by Kremer, 2017 is an opinion article and the consensus of the peer reviewed literature does not concur with this opinion piece. The other article referenced by the commenter (Gaupp-Berghausen et al. 2015) is a study that was conducted under agricultural environments with excessive amounts of glyphosate applied to the soil. The current proposed action (environmental assessment pages 22 and 23) is to apply glyphosate at a low rate in concentrated areas within a forested environment, which is much less intensive than agricultural environments, and the research has shown would have negligible effects to the soil microbial populations. Also we would follow applicable state regulations, label directions, and Forest Service policy. In addition, the standard management practices and project-specific design features from appendix D of the environmental assessment would be followed in order to minimize the effects of herbicide use on the soil resource.

**Concern – In the environmental assessment, Forest Service analysts should consider that herbicide use may negatively impact public health and safety, in particular that glyphosate may be carcinogenic.**

- “In 2015, the World Health Organization determined glyphosate to be a probable carcinogen.3

- “A study by Cornell University Entomologist (retired) David Pimentel, PhD determined that pesticide use contributes to $1.1 billion in public health care costs, and $2 billion in groundwater contamination each year in the United States.4

- “This letter is to add our voices to others' who are opposed to the USFS proposal to use the herbicides glyphosate and triclopyr in the forest above and around us. We see it as a poisoning that threatens our home and our health. Glyphosate and triclopyr are linked to toxic effects on humans and the environment. These herbicides make their ways into the soil and groundwater, both of which feed us. The World Health Organization considers glyphosate a carcinogen. Multiple scientific studies assess the impacts, including the long-term economic costs, of these herbicides on environmental and public health.” [4-5]

- “The dangers of herbicide use has been covered by Beyond Pesticides and we strongly concur with their findings.” [5-8]

**Response**

The project human health risk assessment examines the potential health effects on all groups of people who might be exposed to any of the pesticides that are proposed for use in this project. This risk assessment is summarized on environmental assessment pages 152-161 and the full report is available in the project record and has been posted on the project website. The project-specific risk assessment finds that, under normal conditions, members of the general public would not be exposed to substantial levels of these pesticides due to project design features which are aimed at reducing the risk of exposure. Pesticide applicators are the individuals most likely to be exposed to a pesticide during the application process. However, application would be consistent with the Forest Service Pesticide Use Policy, and would be in compliance with state and federal regulations. Additionally, it would follow USDA Forest Service Region 5 Best Management Practices for Water Quality and Vegetation Manipulation and the USDA Forest Service Region 5 supplement No. 2100-95-1 to 2150 on Pesticide-Use Management and
Coordination. Appropriate monitoring protocols would also be used to ensure the proposed pesticides are applied according to requirements and label specifications. Additional project design criteria are listed in the environmental assessment appendix D (page 273 and 279-282).

The commenter references the 2015 finding by the International Agency for Research on Cancer (IARC) Monograph Working Group, which determined that glyphosate should be classified as “probably carcinogenic to humans” (Guyton et al. 2015). The issue is a particular group of cancers called non-Hodgkin’s lymphomas. This decision was based on a review of existing studies and not on new research.

In 1991, the U.S. Environmental Protection Agency (EPA) concluded that glyphosate should be classified as a Group E (evidence of non-carcinogenicity for humans) based on a lack of convincing carcinogenicity evidence and considering the criteria in EPA Guidelines for classifying a carcinogen. On December 18, 2017 the EPA released for public comment their draft human health risk assessment for glyphosate as part of their program to reevaluate all pesticides periodically (link at https://www.epa.gov/ingredients-used-pesticide-products/draft-human-health-and-ecological-risk-assessments-glyphosate). Based on a 2016 Scientific Advisory Panel review and subsequent consideration of studies used in the IARC evaluation, the 2017 draft health risk assessment concludes that glyphosate is not likely to be carcinogenic to humans. It has been Forest Service practice to defer to the EPA unless there is a compelling reason to do otherwise. Once EPA’s final risk assessment is completed, sometime in 2018, the Forest Service may consider the need for an update to the glyphosate risk assessment. Additionally, in 2016, a Food and Agricultural Organization (FAO) and World Health Organization joint report, concludes that “glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through diet”.

Our analysis of risk of pesticides is based on the Glyphosate Human Health and Ecological Risk Assessment (Syracuse Environmental Research Associates 2011), which includes a lengthy discussion of the mutagenic and carcinogenic potential of glyphosate, including non-Hodgkins’ lymphoma (Section 3.1.10). Many of the key references used in Guyton (2015) and another recent, but more in-depth review (Schinasi and Leon, 2014) are discussed in the glyphosate risk assessment. The risk assessment concludes (page 70):

The nature of the available epidemiology data on glyphosate is addressed in the U.S. EPA/OPP (2002) assessment:

This type of epidemiologic evaluation does not establish a definitive link to cancer. Furthermore, this information has limitations because it is based solely on unverified recollection of exposure to glyphosate-based herbicides.

Based on an evaluation of the available animal studies as well as epidemiology studies, U.S. EPA/OPP (2002, p. 60943) classifies the carcinogenic potential of glyphosate as Group E, No Evidence of Carcinogenicity. Given the marginal mutagenic activity of glyphosate (Section 3.1.10.1), the failure of several chronic feeding studies to demonstrate a dose-response relationship for carcinogenicity, and the limitations in the available epidemiology studies on glyphosate, the Group E classification in U.S. EPA/OPP (1993a, 2002) appears to be reasonable.

Similarly for triclopyr the EPA has determined that the evidence for carcinogenicity for triclopyr is marginal based on current research and has classified the chemical as a Group D chemical (not classifiable to human carcinogenicity). This position is articulated briefly in U.S. Environmental Protection Agency, Office of Pesticide Programs (1998 as referenced in SERA 2016a), and because of the importance of this decision to the risk assessment, the position is worth quoting directly:

As a result of the August 9, 1995 meeting of the Agency's Carcinogenicity Peer Review Committee (CPRC), triclopyr was classified as a Group D chemical (not classifiable as to human
carcinogenicity). This decision was based on increases in mammary tumors in both the female rat and mouse, and adrenal pheochromocytomas in the male rat, which the majority of the CPRC believed to be only marginal. Overall the majority of the CPRC felt that the animal evidence was marginal (not entirely negative, but yet not convincing). Therefore, the consensus of the CPRC was to classify triclopyr as a Group D chemical, based on what was considered only marginal response and the absence of additional support from structural analogs or genotoxicity. (U.S. EPA/OPP 1998, p. 18, as referenced in SERA 2016a).

The commenter mentions a general study which determined that pesticide use contributes to $1.1 billion in public health care costs, and $2 billion in groundwater contamination each year in the United States. As stated, above, in the proposed action and alternative C, we would minimize or eliminate risk to human health and groundwater by adhering to several best management practices (page 264 of the environmental assessment), standard management practices (page 273), and project-specific design features that reduce the risk of ground and surface water contamination (page 278-279). For all pesticides proposed for use in this project pesticide application would be consistent with the Forest Service Pesticide Use Policy, and would be in compliance with state and federal regulations. We also conducted a project-specific human health risk assessment which characterizes risk to the general public, including sensitive groups to identify risks associated with the project. This risk assessment is summarized on environmental assessment pages 152-161 and the full report is available in the project record and has been posted on the project website. Our analysis also considers the cumulative effect to individuals from repeated exposure and concludes that cumulative toxic effects are not expected at the proposed application rates (environmental assessment page 159). Since glyphosate persists in the environment for a relatively short time (generally less than 1 year), does not bioaccumulate, and is rapidly eliminated from the body, doses from re-treatments in subsequent years are not expected to have additive effects.

See previous responses regarding contamination of soil, surface water, and groundwater.

Concern – The Responsible Official should consider numerous opposing views regarding the human health risks of using glyphosate, in particular the risk that it may be carcinogenic. The Responsible Official should also consider that the chemical has been banned for use in many countries and listed as carcinogenic by the state of California.

- “Based on this single highly questionable SERA study the USFS concludes glyphosate is safe and non-toxic. I have included links to a small sample of these unbiased research conclusions that conclude those exposed to glyphosate are likely to die from cancer later in life…” The commenter includes numerous links to references that contain his opposing views [1-78]

- “Please don't apply a chemical banned for use in California because the chemical causes cancer … in spite of the fact your employer (the USDA in this case) says the chemical is safe.” [1-78]

- “Many carefully designed studies link glyphosate to horrendous bodily harm…If glyphosate is safe why would herbicides that contain the chemical be banned Denmark, England, Italy, El Salvador, Malta, Sri Lanka, France, Holland, Austria, Bulgaria, Germany, Greece, Hungary, Ireland, Japan, Chile, South Africa, Luxembourg, Madeira, Cameroon, Zealand, Peru, South Australia, Russia, France, Switzerland, Columbia, and Costa Rica? Do you think this is untrue? Read: http://www.bing.com/search?q=glyphosate+banned+countries&qs=AS&pq=glyphosate+banned&sk=AS3&sc=6-17&evid=F7EC6E7DA6646BD98BFBAE7BD53595&FORM=QBLH&sp=4” [1-81]

- “Glyphosate banned for use in 27 countries throughout the world California's Office of Environmental Health Hazard Assessment has declared glyphosate a carcinogen There are 18,800,000 web sites that link glyphosate to cancer The USDA has been cozy with herbicide and pesticide manufacturing corporations for over 70 years I will not be surprised when you reject the
overwhelming evidence I have just presented showing some people who are exposed to glyphosate might die. I suggest you use your computer search engine. Search on "glyphosate" and "cancer." You will get 18,800,000 hits. Here, I'll save you some time:  
http://www.bing.com/search?q=glyphosate+cancer&qs=LS&pq=glyphosate+&sk=LS2&sc=8-11&cvid=96E89DA51EBF4CBA8B321C21FD78F0A1&FORM=QBLH&sp=3&ghe=1  If you would not use this carcinogen at home is it right to use it on public land … especially when there are alternatives that will accomplish your goals?” [1-88]

• The commenter provided an attachment called “Glyphosate Dangers” which states that: "This document contains links to Monsanto and glyphosate safety literature. Of course we cannot believe everything posted on the web, but you will get 765,000 hits when you search for websites that contain the words "glyphosate" and "cancer."" (See full attachment) [1-94]

• “Request for changes to be made to the final NEPA document: Clearly indicate herbicides that contain glyphosate will not be used anywhere, at any time, for any reason. Failure to tell the public this chemical will not be applied to your forest leaves the door open for glyphosate application. This violates: 18 U.S.C. § 1001(c) because the Responsible Official relied on a single (emphasis added) research conclusion that glyphosate is safe made by a lab with possible ties to Monsanto (Syracuse Environmental Research Associates—SERA) knowing the research conducted by hundreds of independent scientists reveals glyphosate exposure may cause birth defects, miscarriages, premature births, cancer - non-Hodgkin's lymphoma and hairy cell leukemia, DNA damage, autism, irreparable kidney and liver damage, infertility, learning disabilities, ADHD and other neurological disorders (especially in children), mitochondrial damage, cell asphyxia, endocrine disruption, bipolar disorder, skin tumors, thyroid damage, decrease in the sperm count and chromosomal damage 40 CFR 1501.2(b), 40 CFR 1502.16(a) and (b), and 40 CFR 1508.8(b) because Chapter 3 omits important environmental effect disclosures related to glyphosate research (i.e. glyphosate exposure is statistically correlated to birth defects, miscarriages, premature births, cancer - non-Hodgkin's lymphoma and hairy cell leukemia, DNA damage, autism, irreparable kidney and liver damage, infertility, learning disabilities, ADHD and other neurological disorders (especially in children), mitochondrial damage, cell asphyxia, endocrine disruption, bipolar disorder, skin tumors, thyroid damage, decrease in the sperm count and chromosomal damage cancer) 40 CFR §1508.27(b)(2) because the intensity discussion fails to discuss the degree to which the proposed action affects public health or safety. The Apr. 21, 1997 Executive Order No. 13045 because the Responsible Official does not ensure that this project will not disproportionately expose children to environmental health risks and safety risks. 40 CFR §1508.27(b)(2) because you will not discuss the degree to which the proposed action affects public health or safety in the FOIA intensity section.” [1-101]

Response
See the response above related to our analysis of risks to human health and to the finding of glyphosate as potentially carcinogenic by the International Agency for Research on Cancer (IARC) Monograph Working Group. Studies linking glyphosate to cancer, neurological diseases, and birth defects generally are for rates, formulations, or uses that are dissimilar to this project. Some of the websites refer to cellular level studies that are not applicable to real world exposure risks. Research conducted on whole organisms (e.g. rats, quail, etc.) using plausible exposure routes (e.g. dietary, direct spray) with glyphosate provide the best available science regarding risk from Forest Service applications. Whole organism studies have been conducted, have been reviewed by EPA, are included in Forest Service risk assessments, and form the basis of our conclusions.

The commenter lists general information and opinions related to glyphosate and human health risks. The comments do not reference any information specific to the proposed use of the chemicals in the
Moonlight Fire Area Restoration project that contradicts the findings in this analysis. We suggest that the individuals submitting the list of references explain, in detail, why the studies referenced would significantly change or alter any of the consequences that the Forest Service has or will disclose to the public. Literature searches generated from the Internet, for example, do not provide useful information to the Forest Service unless the significance of the information is outlined and the rationale as to why the information is important is explained sufficiently.

The articles cited by the commenter fall under the broad category of editorials, blogs, popular media or other opinion driven journalism and did not come from peer-reviewed scientific literature. None of these articles demonstrate that the Forest Service omitted use of the best available science-based literature in its analysis. Some of the articles include references to scientific sources, but these, when followed, did not clearly support the statements in the articles. For example, one statement in regards the report published January 2017, in the journal Nature, linked low doses of glyphosate to non-alcoholic fatty liver disease, suggesting that there is no "safe" level of glyphosate despite otherwise indicated by regulatory agencies." came from a web blog, not a peer-reviewed scientific journal. The study cited as published in Nature (Mesnage et al. 2016), was actually published in a non-peer reviewed open source website. Furthermore, Mesnage et al. applies to conditions related to chronic exposure to Glyphosate in an agricultural setting, rather than the forestry application appropriate to the project.

The risk assessments and other information in the environmental assessment constitute best available science. Syracuse Environmental Research Associates is an independent laboratory that has performed risk assessments on a variety of chemicals under contract to the Forest Service. Forest Service risk assessments are reviewed for adequacy on a continuing basis. The Forest Service monitors the Environmental Protection Agency (EPA) activities in registration or reregistration notifications to chemical manufacturers when additional studies may be required for continued registration. We particularly look for new EPA Health Advisory Notices for the pesticides used by the Forest Service. We also monitor the manufacturers to determine if new formulations of pesticides are entering the marketplace. Numerous other sources are monitored to determine if significant new information is available. If significant new information was identified, we would carefully evaluate the need to update the existing risk assessment. In general, the Forest Service completes new risk assessments on a specific pesticide on about a 10-year cycle, especially if new credible scientific studies have been completed since the last risk assessment was prepared.

The finding of no significant impact finds that there will be no significant effects on public health from applying herbicides due to the use of best management practices, standard management requirements, and design features. In addition, because the general public is less likely to be exposed to herbicides due to design features which would include area closures and public notices, children are not likely to be disproportionately affected.

Concern – The use of herbicides will result in significant effects, requiring the preparation of an Environmental Impact Statement.

- “Our organization is concerned that the U.S Forest Services' (USFS) Moonlight Fire Area Restoration Project #49421 will result in significant effects on the environment. Herbicide use under proposed action B is likely to result in significant effects on the environment that warrant USFS to conduct a full Environmental Impact Statement.” [3-1]
- “Otherwise, we find it prudent for USFS to conduct a full Environmental Impact Statement to fully analyze potential adverse effects of chemical use on listed species.” [3-9]
Response

The finding of no significant impact (starting on page 186 of the environmental assessment) documents our finding that though using herbicides would have some risk of adverse effects, it would not result in significant adverse effects requiring the preparation of an environmental impact statement. This finding is supported by the analysis presented in the environmental assessment. Therefore, preparing an environmental impact statement is not necessary.

First, the project is limited in scope and duration. In addition, adverse effects were minimized through best management practices, standard management practices, and design criteria. As stated in the finding of no significant impact (environmental assessment page 187), we considered public concerns that herbicides might significantly affect public health and safety and found that the Human Health Risk Assessment, which examined potential health effects on all groups of people who might exposed, identifies no significant impacts. All appropriate laws, policies, and regulations governing the use of herbicide would be followed. In addition, the environmental assessment found that there would be no adverse effect to drinking water quality because project design features include treatment buffers on all wells, ponds, and springs used for domestic water supplies. Furthermore, within 100 feet of recreation sites (campgrounds, trails, trailheads, and dispersed camping areas), cautionary notice signs would be posted prior to herbicide treatments.

See response above regarding potential effects to listed species, in particularly the Sierra Nevada yellow-legged frog.

Concern – Select alternative D to avoid significant effects from herbicide application.

- "Beyond Pesticides strongly encourages USFS to move forward with Alternative D- No herbicide use, rather than the proposed action, in order to allay significant environmental concerns.” [3-2]

Response

In response to the initial public comments received during scoping, we considered alternative D in detail to compare the effects of proposed herbicides with an alternative that does not use herbicides. The effects analysis in chapter 3 of the environmental assessment shows that alternative D would result in fewer potential negative effects to project area resources including: water (page 106), soil (page 96), wildlife (page 141-142), or human health (pages 161 and 172). However, alternative D would result in less effective reforestation treatments when compared to alternatives B and C, because without herbicides, the tools available to control shrub competition would not be effective enough to meet reforestation goals (as described on pages 60-61 of the environmental assessment). While Alternative D would remove down and dead fuels and shrub competition in the short term with mechanical or hand treatments, it would be result in increased shrub competition in the long term, based on studies of similar vegetative communities (EA page 60-61). In addition, our experience has shown that past reforestation efforts in the project area that did not use herbicide release treatments have resulted in fewer trees per acre than desired, due in part to competition from brush. Alternative D is not expected to meet our desired trees per acre result for reforestation effects. Finally, it should be noted that longer term (10-20 years after treatment), the increased shrub competition and re-growth could pose a slight increase in wildfire behavior (EA page 75). If fire occurred under severe wildfire conditions or drought, re-burn of planted stands containing a large amount of brush competition could further reduce tree survival. This would decrease the effectiveness of the treatments and our ability re-establish forested conditions. Restoration of the forested environment would have a long-term benefit to water, soil, wildlife and the people who use the Forest.

The effects analysis shows that many potential negative effects from herbicides to water, soil, wildlife, and human health, are avoided or minimized by following all law, regulation, policy, label requirements
and design features for herbicide use. For example, in the hydrology analysis findings: “herbicide runoff to streams or water bodies is not expected due to prevention measures from best management practices and project design features which would minimize accidental contamination. Therefore streams, water bodies and riparian area are expected to experience minimal, short-term and negligible effects” (environmental assessment page 107). See previous responses related to our consideration of the effects of herbicides.

The finding of no significant impact documents our finding that using herbicides, while it would have some risk of minor and short-term adverse effects, would not result in significant adverse effects requiring the preparation of an environmental impact statement. See response above that includes more information about the finding of no significant impact.

**Concern – Holistic approach or organic alternatives to herbicides should be used.**

- “We find it prudent for USFS to conduct a full Environmental Impact Statement….with consideration for the use of non-synthetic, less toxic herbicides. Beyond Pesticides suggests consideration of the use of herbicides that are permitted in certified organic operations by the U.S. Department of Agriculture as an alternative to the use of herbicides with known ecotoxicity and ground water contamination profiles. We do not believe any environmental analysis could be complete without such an evaluation.” [3-10]

- “It's time that the USFS develop proposals using alternatives to herbicides, such as the entirely feasible and locally indicated holistic management and, perhaps, products are permitted in certified organic farming. We all benefit as we restore and protect the health of our public lands. Let's give a pilot project using holistic management a real chance.” [4-4]

- “It is understood that mechanical methods must be used, but nevertheless the Native American community is entirely opposed to the use of chemical herbicides in our forests. We request the USFS broaden their horizon, mimic nature, and provide a solution that is environmentally, financially, economically and socially feasible.” [5-10]

**Response**

As stated above, the Plumas National Forest is committed to using an integrated approach to reforestation and in some locations, we would apply herbicides to control competing vegetation. The proposed release treatments would utilize non-herbicide tools such as machine pulling, mastication, and hand grubbing. However, herbicide use is also proposed because past experience has shown that the non-herbicide treatments alone may not yield sufficient regeneration to meet the reforestation objectives. We are aware of no EPA-approved organic non-herbicide methods which will assure reforestation success and no specific approaches are proposed in these comments.

The project is being proposed to meet specific purposes and needs, which were identified in context of landscape level post high-severity fire. These include objectives for reforestation of some of the high severity fire areas, and establishment of a long-term seed source of desirable conifer species. To meet the needs, a series of steps to control competing vegetation have been identified and analyzed in the environmental assessment. Mechanical treatment of material is a significant step to control competing vegetation to achieve proper conditions for reforestation, as this step removes the existing brush. Grapple piling is the preferred method of mechanical treatment, with an excavator with grapple hook pulling brush from the ground. This removes the entire plant from the soil, including the root crown. Removing the root crowns reduces future water competition from these brush species, and prepares the site better for conifer planting by removing competing species. Where site preparation with grapple piling and/or mastication are not sufficient to reduce competing species, herbicide use is proposed.
The methods proposed have been conducted on private and federal lands for many decades, and have proven results of reforestation success. The National Forest Management Act of 1976 (Section 4), as well as other guiding policies, directs the Agency to reforest. Areas that are being proposed for reforestation in this environmental analysis are designated in the 1988 Plumas National Forest Land and Resource Management Plan (USDA Forest Service 1988) as areas that are suitable for timber harvest, and they were previously forested lands.

In response to public scoping comments, we analyzed alternative D, which does not include the use of herbicides and relies on mechanical and hand treatments. As demonstrated in the environmental assessment, research and experience has shown that reforestation without the use of herbicides is not likely to achieve our purpose and need for reforestation (environmental assessment page 60-63). There have been previous attempts to reforest these areas that were deemed unsuccessful as they did not meet the appropriate level of stocking. Herbicide use is now being proposed to increase the potential for better success.

Concern – We propose that grazing be used as an alternative to herbicides, and recommend a pilot project to test this approach.

- “We also urge USFS to further consider the use of goats as an alternative to herbicide use. Where herbicide applications fail in promoting functioning ecosystem services, preserving clean ground and surface water, protecting human health, and stopping pest resistance, goats grazing succeeds. Goats not only increase the amount of nutrient, micronutrient and microbial diversity of the soil, but also add to its capacity to hold and filter water and nutrients. By restoring and stabilizing the soil, goats can help decrease excess nutrient flow into local streams, conferring added protections for water quality and aquatic species.” [3-11]

- “We are proposing that holistically managed grazing be implemented. We are requesting (at a minimum) 1000 acre pilot project, to develop and implement a grazing plan in unison with our local Savory Institute. Most likely prior to planting the conifers. This method imitates nature - moving a large number of animals through an area; allowing their cloven feet to break the soil caps, fertilize with dung and urine, and trample the dry vegetation, which further feeds the biology of the soil. The trampled vegetation builds up the organic matter and preforms the task of catching precipitation, allowing for increased water retention and lessening the potential for erosion. This method will treat the core problem! That being the lack of or complete absence of biology in the soil from the catastrophic fire. Additionally, it will provide a healthy soil scale for the conifer seedlings.” [5-11]

- “Historically the area of the Moonlight Fire was managed with sheep. Using both sheep and goats would be of upmost value as they prefer different vegetation. We have not been able to deduce why sheep would not be permitted, except that in future wild species may be introduced. Without the specific validation from Fish and Wildlife of why sheep currently should not be permitted, we state that the overall health of the forest should be given top priority.” [5-12]

Response

The commenter suggests goat grazing as an alternative to herbicide use, as goat grazing provides benefits that the commenter claims herbicides do not. We considered alternative G, an alternative that utilized grazing in place of herbicides for reforestation activities, but eliminated it from detailed study. The reason for dismissal from detailed study is further described on page 29 of the environmental assessment. The primary reason for dismissal was that grazing will not allow for targeted control of competing vegetation.

The proposed action for reforestation and release is described on pages 22 to 23 of the environmental assessment. The proposal consists of site preparation (removing shrubs and some standing trees), planting
conifers, and release treatments (removing competing shrubs using mechanical, hand and herbicides treatments). As stated, herbicide use is proposed as secondary treatment in some areas, after machine piling or hand grubbing of competing vegetation are completed. Herbicides are proposed as a method to more directly target and remove competing vegetation within a radius of 5 to 7 feet around planted sites. It is proposed for use where the grapple piling and hand grubbing alone are not sufficient to control competing vegetation.

The commenter places grazing in context of a site preparation technique, and suggests that grazing be used for the initial primary removal of vegetation (see comment 5-11). The project does not propose herbicide use as a site preparation technique. Rather, the project would remove competing vegetation by machine piling. As a site preparation technique, machine piling would remove the entire plant, including the root crown, pile it and then burn the piles. Mastication may be used, if machine piling is infeasible for an operational reason. Machine piling is preferred, as this would remove the root crown of the competing vegetation (primarily Ceanothus species). Machine piling would remove the entire plant from the site. Assuming goats could be encouraged to graze on the species targeted for removal, grazing would only remove the top part of the plant, and would leave the root crown intact in the soil. Removing the entire plant is necessary to provide proper site conditions, including increased soil moisture and lack of competition. Ceanothus species are documented in scientific literature to re-sprout when the root crown is left undisturbed, and grazing is unlikely to affect the root crown. In a short period of time, it is likely that the plants would return to the site, and at no point would competition for soil moisture be relieved through grazing, because the root crown would persist in the soil, using soil moisture.

Herbicides are proposed for the release treatments, because past reforestation attempts in the same areas of the Moonlight Fire area did not result in full stocking. We propose using herbicides so that we will have another tool to assist with reforestation success, so that previously forested areas can again be forested. Grazing was eliminated from detailed study as an alternative to herbicides as it is not expected that grazing could be conducted in the same way (targeted treatments within 5 to 7 foot radius of planted trees) without damaging the planted trees.

While sheep grazing did occur within the Moonlight Fire Area in the past, it has not used as a management tool for meeting forest restoration goals and, as stated above, we do not believe they could sufficiently meet our project objectives. In addition, as the commenter alludes to, the State of California remains interested in keeping the Moonlight Range allotments free of domestic sheep to support future desert big horn sheep conservation efforts in Plumas County.

NEPA, process, budgets, and other

Concern – The Forest Service did not listen to Native American’s concerns.

- “Our community came together in Taylorsville to express their views, concerns and opinions to you. Unfortunately, as with so many other entities, there appears to have been a predetermined outcome for this "meeting". It is truly a sad day when members of the Native American community are saying: "The USFS did not listen to us, so we walked away". The wisdom of these Native Peoples is passed from generation to generation; they are acutely aware of nature and forest health." [5-9]

Response

We initiated government-to-government consultation with Federally-recognized Native American tribes concurrent with project scoping in the summer of 2016. A letter was mailed to representatives of seven Tribes inviting their comments on the project. Concurrent with scoping, we invited the public and tribal representatives to attend a public meeting. Two comments from tribal representatives were received and
addressed in the environmental assessment as issues and alternatives (alternative D). The same
individuals were also sent a letter to notify them of the publication of the environmental assessment and
another opportunity to comment in October of 2017. However, we did not receive any comments from
tribes regarding the analysis in the environmental assessment, nor did we receive requests for meetings.

In addition, in October of 2016, the Forest staff participated in the Moonlight Fire Tour, an educational
workshop coordinated by California Invasive Plant Council, to discuss options for post-fire vegetation
management, especially as it related to invasive plant treatments. While much of this discussion was
focused on invasive plants, some of the discussion related to alternative treatments is relevant to the
current comments.

**Concern – In the environmental assessment, Forest Service analysts should address the impacts of inadequate funding to implement the proposed project.**

- “The Agency has failed to analyze the impacts of the likely event that the agency will not have
adequate funding to complete, or maintain the proposed project. History has shown and will likely
repeat that the agency will squander available resources, and run out of funds partially through this
project. The proposed project contains activity well outside the perimeter of the Moonlight Fire,
apparently to transfer settlement funds from their intended use to pet projects favored by Forest Staff.
No priority has been established to ensure that actual restoration occur first. An analysis to determine
the environmental effects of this failure to prioritize, should be performed prior to its approval.” [2-5]

- “Surely we must agree the forest ecosystem health is of paramount importance to the economic
stimulation of our community. Yet, the constraints, either from the bureaucracy of the USFS itself or
poor management, has left the area burned in the Moonlight Fire far lacking in providing for the
economic welfare of the current and future generations of our children.” [5-1]

**Response**

We identified a need for action in response to the Moonlight Fire and project area conditions. The
proposed action was developed to address the purpose and need and bring the project area closer to
desired conditions, which include ecosystem health and a productive forest that can provide both
ecological and socioeconomic benefits. This is the primary driver for the proposed action. That said, the
interdisciplinary team has considered the likely availability of funding and capacity to implement fire
restoration work. For example, areas in need of vegetation management or reforestation activities were
prioritized to develop the proposed action and not all areas were included. If a decision is made to
implement the proposed action, a variety of funding sources could be used, including fire settlement
funds, appropriated funds, stewardship contracting, and partnership agreements. These specific funding
sources are not relevant to the environmental effects and so are not described in the environmental
assessment. Forest budgets are determined on an annual basis and therefore, the program of work to
implement project decisions is also determined annually.

The environmental assessment describes the impacts of the project on economics and quality of life. The
proposed restoration activities would support a maximum of 36 jobs and $1.75 million labor income
annually during project implementation.

**Concern – NEPA requires the Responsible Official to consider opposing views provided in public comments.**

- “Responsible Officials are legally required to provide meaningful responses to each Opposing View:
Each opposing viewpoint is different and is related to a unique subject, therefore a single response
attempting to deal with all opposing views simultaneously does not respond to opposing views as
required by law. 40 CFR 1502.9(b) "Final environmental impact statements shall respond to comments as required in part 1503 of this chapter. The agency shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised." For the readers convenience, if they are still available I have included electronic links to the source documents for the opposing views contained in the Attachment. As you can see in the law quoted above, the Responsible Official must respond to all opposing views (regardless of source) that are responsible. This would include opinions and data interpretations expressed in books, written or electronic media presentations, and magazines etc. Failure to provide meaningful responses to responsible opposing views regardless of their source will violate 40 C.F.R. § 1502.9(a) and 1502.9(b) and. 42 USC § 4372(d)(4). Not responding to responsible opposing views is also inconsistent with court precedent: In Center for Biological Diversity v. United States Forest Service, Argued and Submitted July 15, 2003, In the United States Court of Appeals, Ninth Circuit, the court stated: "Accordingly, we find that the Final EIS fails to disclose and discuss responsible opposing scientific viewpoints in the final statement itself in violation of NEPA and the implementing regulations. We therefore reverse the district court's grant of summary judgment and remand to the district court with directions that it remand the final statement to the Forest Service for further proceedings consistent with this opinion." In Sierra Club v. Eubanks 335 F. Supp. 2d 1070 (ED Cal. 2004), the court stated: "credible scientific evidence that [contradicts] a proposed action must also be evaluated and considered." In Seattle Audubon Society v. Lyons 871 F. Supp. 1291, 1318 (W.D. Wash. 1994), the court stated: "[the EIS] must also disclose responsible scientific opinion in opposition to the proposed action, and make a good faith, reasoned response to it." In Seattle Audubon Society v. Moseley 798 F. Supp. 1473 (WD Wash. 1992) , the court stated: "[t]he agency's explanation is insufficient under NEPA … not because experts disagree, but because the FEIS lacks reasoned discussion of major scientific objections." In Sierra Club v. Bosworth 199 F.Supp.2d 971, 980 (N.D. Cal. 2002), the Court held that the Forest Service violated NEPA when it failed to: "disclose and analyze scientific opinion in support of and in opposition to the conclusion that the…project will reduce the intensity of future wildfires in the project area." [1-52]

Response

Members of the interdisciplinary team are considered proficient in their field of study by way of academic achievement, agency training, years of professional experience, and in some cases, certification programs. Team specialists identified the methods used in their analyses and referenced the scientific sources upon which their analyses were based (refer to the references section in the environmental assessment and specialist reports). Unlike the attachments provided with the comments, our analysis in the environmental assessment focuses on the site-specific cause-effect relationships of the alternatives for each resource.

The interdisciplinary team has used scientific literature that they deem reliable to support their analysis and conclusions. The opposing views comments and attachments have been reviewed by the interdisciplinary team members in preparing the responses in this document. The opposing views that are specific and relevant to the Moonlight Restoration Project proposed action are responded to in this document. Other opposing viewpoints provided did not specify how they were relevant to the proposed action and therefore were reviewed and responded to with less detail. Many of the opposing views are quotations not tied to specific proposed actions, as suggested under 40 CFR 1503.3(a) and 36 CFR 218.2. Rather, they are individual statements gathered together to support a general point of view or position that are not specifically relevant to the proposed action or environmental analysis. Therefore, they are acknowledged, but not responded to.
The *Earth Island Inst. v. Carlton* (9th Cir. 2010) case found that “an agency need not respond to every single scientific study or comment.” The *Lands Council v. McNair* (9th Cir. 2008) court case found that “The Forest Service must support its conclusions ... with studies that the agency, in its expertise, deems reliable. The Forest Service must explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable.”

This case also found that, “it is not the proper role for a federal appellate court to act as a panel of scientists that chooses among scientific studies. Our law requires us to defer to an agency's determination in an area involving a high level of technical expertise. We are to be most deferential when the agency is making predictions, within its area of special expertise, at the frontiers of science. We are to conduct a particularly deferential review of an agency's predictive judgments about areas that are within the agency's field of discretion and expertise ... as long as they are reasonable. Though the Forest Service must explain the methodology it used ..., NEPA does not require us to decide whether [a NEPA document] is based on the best scientific methodology available.”

Additionally, the Forest Service is not required to adopt opposing viewpoints. The *Marsh v. Oregon Natural Resources Council* (Supreme Court 1989) case found that “When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.”

**Concern – The Responsible Official violated NEPA regulations because he did not make supporting information available to the public.**

- “Supervisor Lovato competent Responsible Officials do not hide important project-related information from the public in the project file. Some members of the public want to read and understand all the information related to a proposed USFS project. You have selectively chosen to omit some of this information from your online NEPA information. Many members of the public will wonder what you are hiding from public view. This is government censorship. You and your IDT members know 99.9999% of the American public would not travel to read the Project File, thus you all figured that would be a good place to hide suspicious information. Even an inexperienced computer specialist can make any USFS document available to the online in less than an hour. A child could do this. Do you really expect a member of the public to drive (or fly) thousands of miles to view public information? This is what you hide hardcopy at Quincy California: "The equivalent roaded area analysis is conducted at the sub-watershed scale (see project file)." (pg 104) "The project file also contains a management indicator species report." (pg 143) "According to CalFire reporting, additional timber harvest has occurred on private lands that were not impacted by the fire (CalFire report with details is available in the project file)." (pg 294) Hiding important information hundreds or thousands of miles from the public violates: 40 CFR 1500.2(b) because no evidence is presented for environmental effects conclusions. 40 CFR 1501.2(a) because the environmental effects and values are not identified in detail. 40 CFR 1500.1(b) because there is no substantiating evidence for effects conclusions, thus, the public cannot determine if they are accurate and based on best science. 40 CFR 1506.6 (a) because you did not Make diligent efforts to involve the public in preparing and implementing NEPA for this project. 40 CFR 1506.6 (b) because you did not make environmental documents available so as to inform those persons and agencies who may be interested or affected. 40 CFR 1500.2 (d) because you did not encourage and facilitate public involvement in decisions which affect the quality of the human environment.” [1-90]

**Response**

According to 40 CFR 1508.9(a), the purpose of an environmental assessment is to “briefly provide sufficient evidence and analysis for determine whether to prepare and environmental impact statement or
a finding of no significant impact.” Forest Service regulations state that an “EA may incorporate by reference information that is reasonably available to the public” (36 CFR 220.7(a)). It is appropriate that the environmental assessment cite and summarize reference material to reduce bulk (40 CFR 1502.21) and that reference material be available to the public in the project record. The project record consists of a set of documents that support the environmental assessment and the decision-making process. These documents are public and are available upon request, though abnormally large requests may require the use of a Freedom of Information Act request. In most cases, the documents may be provided electronically to those requesting them.

After this comment was received in October 2017, we immediately posted electronic copies of the specialist reports referenced in the environmental assessment to the public website. We notified the commenter that these were posted and that other referenced documents were available upon request, but did not receive additional comments or more detailed requests for information.

Vegetation, Fire and Fuels

Concern - In the environmental assessment, Forest Service analysts must disclose adverse effects of timber harvest, considering best science and opposing views.

- The commenter asks us to consider his several Opposing views attachments which contain positions and general opinions.

- “Please assure that your Chapter III effects disclosures for No Action and the Proposed Action are consistent with the science I present in the Opposing Views Attachments. Based on the “best science” if your resource will be damaged or destroyed please indicate this is likely to occur in your effects disclosures.” [1-53]

- “Indeed, the Federal Courts agree that the Responsible Official must disclose and consider “adverse impacts” based on best science when making the final decision. Earth Island Institute and Center for Biological Diversity v. Dale Bosworth Chief of the US Forest Service and John Berry Supervisor of the Eldorado National Forest, Ninth Circuit Court of Appeals, Filed March 24, 2006 Link to the final opinion: http://ftp.resource.org/courts.gov/c/F3/442/442.F3d.1147.05-16776.html Opinion Excerpt: “Conclusion We have noticed a disturbing trend in the USFS's recent timber-harvesting and timber-sale activities. See, e.g., Ecology Ctr., Inc. v. Austin, 430 F.3d 1057 (9th Cir. 2005) (holding that the USFS's post-fire treatment of old-growth forest stands in the Lolo National Forest violated both the NFMA and NEPA, and that the EIS failed to explain adequately the adverse impacts of the proposed plan on the black-backed woodpecker); Lands Council v. Powell, 395 F.3d 1019 (9th Cir. 2005) (reversing the district court's grant of summary judgment to the USFS because its EIS did not take a “hard look” at past timber harvests or current trout habitat conditions); Idaho Sporting Cong. v. Rittenhouse, 305 F.3d 957 (9th Cir. 2002) (remanding to the district court to enjoin two timber sales approved in violation of the NFMA and NEPA). See also Utah Envtl. Cong. v. Bosworth, 421 F.3d 1105 (10th Cir. 2005) (holding that the USFS did not properly monitor MIS species and did not consider a reasonable range of alternatives in a proposed timber-harvesting project); Sierra Club v. Eubanks, 335 F. Supp. 2d 1070 (E.D. Cal. 2004) (granting a preliminary injunction against salvage logging provided for in the USFS's post-fire Red Star Restoration Project); Sierra Club v. Bosworth, 199 F. Supp. 2d 971 (N.D. Cal. 2002) (rejecting the USFS's argument that post-fire salvage burning was needed to prevent a future fire and enjoining implementation of post-fire salvage logging); Colo. Wild v. U.S. Forest Serv., 299 F.Supp.2d 1184 (D. Colo. 2004) (granting a preliminary injunction of a timber salvage project because the USFS failed to gather population data for MIS species); Forest Guardians v. U.S. Forest Serv., 180 F. Supp. 2d 1273 (D. N.M. 2001) (reversing authorization of a
timber sale in the Cibola National Forest because of the USFS's failure to collect adequate MIS population data).”” [1-73]

• “Hiding the adverse effects of post-fire logging will violate 40 CFR 1500.2(f) because you twist and minimize the environmental effects to smooth the way for this sale knowing the sale will not “restore and enhance the quality of the human environment” and: Hiding the adverse effects of post-fire logging will violate Administrative Procedures Act which directs judges to set aside an agency action if the court determines that the action is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Hiding the adverse effects of post-fire logging is inconsistent with the March 9, 2009 White House Memorandum to heads of executive departments and agencies states: “Science and the scientific process must inform and guide decisions of my Administration on a wide range of issues, including improvement of public health, protection of the environment, increased efficiency in the use of energy and other resources, mitigation of the threat of climate change, and protection of national security. Hiding the adverse effects of post-fire logging will violate Executive Order #13563 issued on January 18, 2011 that requires federal agencies to use best available science: "General Principles of Regulation. (a) Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science.””[1-74]

Response
As stated in previous responses, it should be clarified that the project does not include post-fire salvage logging. The environmental assessment includes a review of the environmental impacts of the proposed vegetation management activities, including the supporting road reconstruction and temporary road construction. The analysis, generally, finds that some short-term negative effects may occur to water quality, soils, and wildlife, though these are minimized to the extent feasible with best management practices and design features. In the long term, the proposed action is anticipated to improve many project area conditions. The Finding of No Significant Impact concluded that the adverse effects of the project are not significant and notes that “the beneficial effects of forest restoration, reforestation, and watershed improvement activities were not used to offset or compensate for the potential adverse effects of the proposed treatments. We considered the impacts associated with the proposed action and alternatives separately from the beneficial effects, and the beneficial and adverse impacts are not significant” (environmental assessment page 187). The analysis is compliant with relevant law, regulation, and policy, as stated in the Finding of No Significant Impact (environmental assessment page 190-193).

Team specialists identified the methods used in their analyses and referenced the scientific sources upon which their analyses were based (refer to the references section in the environmental assessment and specialist reports). The interdisciplinary team has used scientific literature that they deem reliable to support their analysis and conclusions.

The Opposing Views attachments (attachments) submitted by the commenter are general position statements and do not directly address proposed activities that are associated with the Moonlight Restoration project. The specific attachments are responded to, where they are relevant to the concerns and comments below.

Concern – The project is not restorative. Remove the word restoration from the project name and purpose and need.
• “You will convert the sale area into a landscape with stumps, roads and skidtrails devoid of most trees. How can it be that this was the former or original state? Comment #3: Supervisor Lovato, what are your qualifications that permit you to ignore the conclusions of USDA Office of Inspector General


Comment #4: Supervisor Lovato, what are your qualifications that permit you to ignore the conclusions of Thomas Michael Power Ph.D. who is the Professor and Chairman of the Economics Department, University of Montana? He said "Commercial logging is not a prescription for forest health; it is one of the major causes of unhealthy forest conditions. Until the forest products industry stops trying to insist that clearcutting our public lands is necessary for the health of those lands, we will make no progress in restoring those lands. Equating forest health with timber company profits condemns out forests to either the commercial ravages of the past or the management paralysis of the present. Both are bad for our forests and for those of us who have chosen to live in beautiful, but naturally dangerous, forested landscapes." The Politics of Forest Fires -- The Abuse of Other People's Hard Times. A paper by Power, Thomas Ph.D., 8/15/2000 http://www.forwolves.org/ralph/tompower.htm” [1-61]

“Comment #5: Supervisor Lovato, you name your timber sale the Moonlight Fire Area Restoration project. How is it different from the sales studied by OIG scientists in 2001? We both know your scheme. You think the public will be more likely to accept your timber sale if you tell them it's a restoration project. Of course this is not true…. Anyone! I repeat, anyone who really believes logging and road construction "restores" the forest ecosystem has either 1) never seen the tragic after effects of logging firsthand in the field, or 2) is clinically obsessed by the need to generate volume and will try to trick and deceive the public in any way to make that happen. People who aren't driven to comply with the agency's timber agenda understand the tragic ecological impacts of logging especially after reading Opposing Views Attachments #1 and #4."” [1-63]

“Comment #6: Supervisor Lovato, how will exposing the forest's natural resources to noisy skidders and tractors weighing 17 tons with spinning wheels and tracks create a healthier", "restored" forest? A forest is infinitely more than trees. Here's a little history on "restoration projects." The public's opposition to timber sales and commercially logging their national forests had been steadily increasing. In the fall of 2008 Chief Kimbell took action hoping to regain agency credibility. She knew she must never take action to really reduce the adverse impact of logging so she chose deception to maintain agency timber goals as part of her attempt to placate and pacify the public. She issued verbal direction to the Regional Foresters to phase out the use of the terms "timber sale" and "logging" in documents that might be read by the public. "Timber sale" was to be replaced with "restoration project" and "logging" was to be replaced by "treatment."” [1-64]

“Comment #8: Accumulating volume and spending all your NFTM allocation this FY simply isn't worth the natural resource damage you will inflict. How can you possibly claim the Moonlight timber sale is a "restoration project?" This is not a rhetorical question. I invite you to view the "restored" national forest landscapes after an agency restoration project at Opposing Views Attachment #27.” [1-66]

“Request for changes to be made to the final NEPA document: Eliminate "Restoration" from the sale name and eliminate the word "restore" from the text of the final EA. Failure to do so will violate: 18 USC § 1519 and the public trust. 40 CFR § 1500.1(b) because actions were not taken to protect, restore, and enhance the environment, and 40 CFR 1500.2(f) because actions were not taken to avoid or minimize any possible adverse effects of their actions on the quality of the human environment. 18 U.S.C. § 1001 (a)(3) because you knowingly and willfully "relied on false writing or document" inconsistent with the science conclusions of scores of independent Ph.D. scientists "knowing the same to contain any materially false, fictitious, or fraudulent statement or entry."” [1-67]
Response

The project is proposed in response to a catastrophic fire, which changed landscape level conditions. These changes are described in the Moonlight Restoration Strategy (USDA Forest Service 2013) and within the environmental assessment and project specific resource reports. As stated in the 2013 Moonlight Fire Area Restoration Strategy, “the overarching goal of restoration in the Moonlight Fire area is to maintain, create, and promote healthy and resilient systems, which may resemble the past, but are also better prepared for changing climates and human use patterns” (USDA Forest Service 2013). The project is being proposed to restore damages that have resulted from this fire. In addition, forested areas proposed for mechanical thinning that were not affected by the fire are being included with the objective of preventing future high severity wildland fire and to restore diversity, structure, and function that has been lost due to past fire suppression and forest management.

The proposed action does not necessarily seek to return the project area to a specific forest state that existed in the past. It does incorporate a restoration strategy, as outlined in Forest Service Technical Reports PSW-GTR-220 and 237 (North et al. 2009, North et al. 2012), that reduces stand density to more sustainable levels, increases landscape heterogeneity and resilience to disturbances, while enhancing vigor and growth (environmental assessment pages 7-8, 13-14). The application of mechanical thinning as a restoration tool has been touted as an example in both PSW-GTR-220 and PSW-GTR-237. While many of these desired forest conditions emulate historical structure, it is because they provide an ideal reference for a healthy and resilient forest (environmental assessment pages 55-56). This restoration approach is consistent with the Sierra Nevada Framework where general forest allocation should be actively managed “to maintain, and enhance a variety of vegetative conditions in which forest structure and function generally resembles pre-settlement conditions. Fuels treatments are strategically placed to modify wildfire behavior. Hazardous fuels are reduced in key areas to lessen the threat of high severity fire.”

The Moonlight Fire Restoration Project includes proposals to thin trees prescriptively, which would result in stumps, and limited road activities associated with harvest operations. These activities, and the resulting effects are described and analyzed in the environmental assessment. The material that would be removed that can be sold as a commercial product would be marketed, as authorized by applicable laws, regulations and policies, as these apply to the Forest Service. However, there is no clearcutting proposed or authorized under the current management direction (USDA Forest Service 2004a, 2004b). Only minor amounts of trees would be removed, and this is described in the project specific vegetation and silviculture report.

The commenter is inferring that the environmental assessment states that “logging” is required for forest restoration, implying that restoration activities are really a commercial endeavor. The Proposed Action intends to use mechanical thinning as the primary vegetation management tool in which both commercial and non-commercial (biomass) trees would be removed to reduce stand density. Commercial sawlogs may be a result of these forest restoration activities. Mechanical thinning simply means that a piece of mechanical equipment (i.e. tracked feller buncher) is a necessary tool to meet project objectives. It does not imply that all areas would necessarily be a commercial timber sale as stewardship contracting is another contractual authority that may be used. There are other land management tools proposed including prescribed fire, hand thinning and piling and grapple piling.
Opposing Views Attachment #27 presents various photographs of salvage logging projects that had the term ‘restoration’ used in the project name. The Moonlight Fire Area Restoration Project does not propose salvage logging. Salvage activities that occurred within the fire area several years ago, are described on page 294 of the environmental analysis. Instead, this project focuses on restoring the landscape, including reforestation of burned areas, reducing conifer encroachment and fuels in aspen stands, and enhancing diversity, structure and health of areas that did not burn with the fire. Attachment #27 is not relevant to the currently proposed project, since we do not propose salvage logging.

Concern – The environmental assessment inaccurately claims a threat of re-burn to support post-fire logging.

- Supervisor Lovato you know fear is one of the strongest motivators of people there is. You tell the public if it isn't logged it will "reburn." Once again the science shows this is another ridiculous claim. You will say anything to assure you generate your precious volume The pre-decisional EA at page 44 says: "In addition to excess fuels decreasing sprouting space, the fuels may increase potential re-burn severity in any future wildland fire events (Coppoletta et al. 2016)." Reburn is a myth invented by the USFS to justify post-fire timber sales. I'll forward the independent science literature proving this if you request it. Why am I not surprised that Michelle Coppoletta is a USFS employee doing her job to help satisfy the USFS timber agenda. Here's a small sample of the science information about re-burns available written by independent scientists unaffiliated with the USFS: Study questions value of post-fire logging Published by High Country News, Feb. 6, 2006 Excerpts: "Foresters commonly argue that post-fire logging removes dangerously flammable dead wood, and that forests recover faster when logged and replanted. But Dan Donato, a graduate student who conducted the new study with five colleagues, found that areas of the Siskiyou Mountains burned by the 2002 Biscuit Fire were bristling with naturally established conifer seedlings two years later. The researchers also found that subsequent salvage logging killed three-quarters of the new trees, and elevated fire danger by scattering tinder on the ground." "Science demonstrating the ecological value of post-fire logging is rare, says University of Central Florida conservation biology professor Reed Noss. What is available falls in the category of "gray literature," a body of industry and agency reports that does not undergo the rigorous peer review process applied by scientific journals." Link: https://www.hcn.org/issues/315/16079 Post-Wildfire Logging Hinders Regeneration and Increases Fire Risk Published by Scienceexpress, January 5, 2006 By: D. C. Donato, J. B. Fontaine Ph.D., J. L. Campbell, W. D. Robinson Ph.D., J. B. Kauffman and B. E. Law Ph.D. Note Mr Kauffman was employed by the Institute of Pacific Islands Forestry, USDA Forest Service, Pacific Southwest Research Station. Excerpts: "Postfire logging significantly increased both fine and coarse downed woody fuel loads (Fig. 1B). This pulse was comprised of unmerchantable material (e.g., branches), and far exceeded expectations for postfire logging-generated fuel loads (5, 6). In terms of short-term fire risk, a reburn in logged stands would likely exhibit elevated rates of fire spread, fireline intensity and soil heating impacts (7)." "Our data show that postfire logging, by removing naturally seeded conifers and increasing surface fuel loads, can be counterproductive to goals of forest regeneration and fuel reduction. In addition, forest regeneration is not necessarily in crisis across all burned forest landscapes. The results presented here suggest that postfire logging may conflict with ecosystem recovery goals." Link: http://www.orww.org/Wildfires/Biscuit/References/Donato_et_al_2006.pdf Reburn severity in managed and unmanaged vegetation in a large wildfire Published in Proceedings of the National Academy of Sciences, June 19, 2007 By: Jonathan R. Thompson, Ph.D., Thomas A. Spies, and Lisa M. Ganio Note: Mr Spies was employed by the Pacific Northwest Research Station, U.S. Department of Agriculture Forest Service Excerpts: "Recent studies have found, however, that salvage-logging can increase surface fuels available to fires above prelogging levels by transferring unmerchantable material to the forest floor, suggesting that this postfire management practice might
actually increase fire risk for a time (3, 8). Until now, no study has quantified how recent fire history and postfire management actually affects the severity of a large wildfire (4)." (pg 10743) "However, the available evidence suggests that the combined influence from a pulse input of surface fuels resulting from salvage-logging (3, 8) followed by the establishment of uniform young plantations may increase susceptibility to severe reburns in the early stages of forest development." (pg 10746)

Links:
https://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/SalvageLoggingScience/Postfire-ThompsonSpiesGanio2007.pdf  https://www.frames.gov/catalog/11124  For those who still aren't convinced I suggest you open and read this science: Forest vegetation and fuel dynamics following stand-replacing wildfire, re-burn, and postfire management in the Siskiyou Mountains, Oregon Link: http://ir.library.oregonstate.edu/xmlui/handle/1957/8449  THE BISCUIT FIRE: TIME TO BURY THE MYTHS  Link: http://kalmiopsiswild.org/1019/the-biscuit-fire-time-to-bury-the-myths/  There are many more. This should be enough to convince any reasonable, intelligent person the USFS's claim that the chances of a reburn increase if the post-fire landscape is not logged is another USFS lie to convince the public post-fire logging is the professional thing to do. Telling the public untrue information that a "reburn" is possible of its not logged violates: 18 USC § 1519 and because you have "knowingly concealed, covered up, and falsified" a document with the intent to "impede, obstruct, or influence" the "proper administration of any matter within the jurisdiction of" the United States Forest Service. 18 USC § 1001(a)(2): "(a) Except as otherwise provided in this section, whoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully- (2) makes any materially false, fictitious, or fraudulent statement or representation" [1-75]

Response
The Moonlight Fire Area Restoration Project does not propose post-fire salvage logging. Hazard tree removal and salvage logging was conducted under previous projects (as discussed on page 294 of the environmental assessment) and has been completed. The commenter refers to research that is directly related to salvage logging. Salvage logging conducted in this landscape removed merchantable material. This project does not propose to remove material that is a result of the wildland fire, or from salvage logging. The proposals in this project are intended to comply with management direction for downed woody debris as outlined in the Sierra Nevada Framework (USDA Forest Service 2004a, 2004b).

Re-burn potential in this project is placed in context of fuels that are over 10 years old and have no commercial value due to decay. No material removed in association with re-burn potential would be sold as commercial products. This project does propose sale of commercial products, but those are green stands, which are unburned. The commenter’s statements are not in context of the project proposals. Project fuels levels would be reduced to those recommended in current management direction (USDA Forest Service 2004a, 2004b).

Concern – Best science indicates that post-fire logging causes significant, long-term, irreversible harm to the natural resources.

• Tragically, USFS resource specialists on both groups will reject the post-fire logging recommendations of over 600 independent Ph.D. biological scientists whose names are listed in these comments. Why? These real (emphasis added) scientists overwhelmingly agree that dead and dying trees in a post-fire landscape must never be removed for any reason … especially to provide corporate profit opportunities. These scientists provide irrefutable evidence showing why and how an undeveloped (unlogged) post-fire landscape is a rare and precious ecological condition. [1-50]
I ask each IDT member to justify why the recommendations of the IDT silviculturist (whose job depends on logging) are more valid than those of over 600 Ph.D. biological scientists. Yes, this is the type of (log it at any cost) agency you work for. Does this make you proud to accept a paycheck supplied by the American taxpayers when you backhand them as you serve corporate America?

Letter #1 In 2006, 540 independent Ph.D. scientists not associated with the USDA signed a letter to the United States Congress. Here are 3 excerpts from the letter: "Although logging and replanting may seem like a reasonable way to clean up and restore forests after disturbances like wildland fires, such activity would actually slow the natural recovery of forests and of streams and creatures within them. 'Many scientist-reviewed studies and syntheses (please see the selected citations appended to this letter) have recently come to this conclusion. For example, no substantive evidence supports the idea that fire-adapted forests might be improved by logging after a fire. In fact, many carefully conducted studies have concluded just the opposite. Most plants and animals in these forests are adapted to periodic fires and other natural disturbances. They have a remarkable way of recovering - literally rising from the ashes - because they have evolved with and even depend upon fire." "In testimony before the House Subcommittee on Resources (November 10, 2005), eminent forest ecologist and University of Washington Professor Jerry Franklin noted that logging dead trees often has greater negative impacts than logging of live trees. He concluded that "timber salvage is most appropriately viewed as a 'tax' on ecological recovery." Beyond those concerns, post-disturbance logging often intensifies the potential severity of future fires by concentrating the slash from logging at or near the ground. Rather than leaving plant material standing - and providing perching, nesting, and feeding sites for wildlife - such logging abruptly moves the material to the ground. Most of this material would naturally fall to the ground, adding important supplies of nutrients and energy to the forest floor and structure in the form of woody debris to stream channels. But this naturally happens over decades, not in the relatively short time associated with a logging operation." Here's the link to the full text of the August 1, 2006 letter to members of Congress:

In 2015, 249 independent Ph.D. scientists not associated with the USDA signed and mailed a letter to the United States Senate and President Obama. The IDT members who have prepared the draft EA for this sale have the education and experience to understand these letters. Ask yourself if you have justification to reject this science. Of course you don't. A professional USFS resource specialists would demand that this science be used to drop the Moonlight Fire Area timber sale. When it isn't they would resign from the IDT. It's simple. Here are 4 excerpts from the letters #2 and #3. "Post-fire conditions also serve as a refuge for rare and imperiled wildlife species that depend upon the unique habitat features created by intense fire. These include an abundance of standing dead trees, or "snags," which provide nesting and foraging habitat for woodpeckers and many other plant and wildlife species responsible for the rejuvenation of a forest after fire. The post-fire environment is rich in patches of native flowering shrubs that replenish soil nitrogen and attract a diverse bounty of beneficial insects that aid in pollination after fire. Small mammals find excellent habitat in the shrubs and downed logs, providing food for foraging spotted owls. Deer and elk browse on post-fire shrubs and natural conifer regeneration. Bears eat and disperse berries and conifer seeds often found in substantial quantities after intense fire, and morel mushrooms, prized by many Americans, spring from ashes in the most severely burned forest patches. This post-fire renewal, known as "complex early seral forest," or "snag forest," is quite simply some of the best wildlife habitat in forests, and is an essential stage of natural processes that eventually become old-growth forests over time. This unique habitat is not mimicked by clearcutting, as the legislation incorrectly suggests. Moreover, it is the least protected of all forest habitat types, and is often as rare, or rarer, than old-growth forest, due to extensive fire suppression and damaging forest management practices such as those encouraged by this legislation. Much of the current scientific information on the ecological importance of post-fire
habitat can be found in several excellent videos, including ways for the public to co-exist with fires burning safely in the backcountry. After a fire, the new forest is particularly vulnerable to logging disturbances that can set back the forest renewal process for decades. Post-fire logging has been shown to eliminate habitat for many bird species that depend on snags, compact soils, remove biological legacies (snags and downed logs) that are essential in supporting new forest growth, and spread invasive species that outcompete native vegetation and, in some cases, increase the flammability of the new forest." (pages 1 and 2) Here's the link to the full text of the September 2015 letter to members of Congress: [http://johnmuirproject.org/wp-content/uploads/2015/09/Final2015ScientistLetterOpposingLoggingBills.pdf](http://johnmuirproject.org/wp-content/uploads/2015/09/Final2015ScientistLetterOpposingLoggingBills.pdf)

Comment #9: Supervisor Lovato, you reject the advice of over 600 Ph.D. biological scientists who signed a letter to Congress in 2006 and a letter to the Senate and President Obama in 2015. Both letters contained multiple reasons why a post-fire landscape must never be disturbed. You reject the science contents of both letters and instead accept the recommendations of your timber employees on the IDT whose jobs depend on selling timber sales. Might there be bias? Keep in mind USFS leaders have been telling the public agency projects are all grounded in "best science" since 1993. [1-70]

- Comment #10: Supervisor Lovato, you have just read 1) a 2006 letter to Congress signed by 540 Ph.D. independent biological scientists, and 2) a letter sent to Congress and President Obama signed by 253 Ph.D. independent biological scientists. Each letter includes undisputable evidence explaining why a post-fire landscape must remain intact and unlogged. Here are short excerpts from each letter:
  
  Letter #1 - "Many scientist-reviewed studies and syntheses (please see the selected citations appended to this letter) have recently come to this conclusion. For example, no substantive evidence supports the idea that fire-adapted forests might be improved by logging after a fire. In fact, many carefully conducted studies have concluded just the opposite. Most plants and animals in these forests are adapted to periodic fires and other natural disturbances. They have a remarkable way of recovering - literally rising from the ashes - because they have evolved with and even depend upon fire." (page 1, paragraph 3)
  
  Letters #2 and #3 - "After a fire, the new forest is particularly vulnerable to logging disturbances that can set back the forest renewal process for decades. Post-fire logging has been shown to eliminate habitat for many bird species that depend on snags, compact soils, remove biological legacies (snags and downed logs) that are essential in supporting new forest growth, and spread invasive species that outcompete native vegetation and, in some cases, increase the flammability of the new forest." (page 2, paragraph 2)
  
  Most competent, caring USFS line-officers who value healthy non-timber natural resources would allow the recommendations of over 600 Ph.D. independent biological scientists to override several biased timber IDT members. [1-71]

- Best science clearly indicates that post-fire logging causes significant, long-term, irreversible harm to the natural resources trying to survive in the burned landscape after the trees have been removed. The dead and dying trees are orders of magnitude more important to the proper functioning of the ecosystem in a post-fire landscape than money. No human development action in the forest inflicts more long-term ecosystem damage than a post-fire timber sale. Anyone (including the USFS Responsible Official and IDT members) who spends the American tax dollar planning and preparing a post-fire timber sale knowingly plunders public land for personal gain … to increase their promotion possibilities in an agency with a overriding timber agenda. Comment #11: Supervisor Lovato and IDT members, clearly the conclusions of over 600 independent Ph.D. scientists recommending to never log a post-fire landscape represent "best science." Why do you reject "best science" knowing Chief Bosworth said this: "The American people have come to expect us to use the best science, and we ought to use the best science." Link to statement: [http://www.andruscenter.org/images/transcripts/Sustainable_transcript.pdf](http://www.andruscenter.org/images/transcripts/Sustainable_transcript.pdf)
science." Link to statement: http://www.waterplanet.ws/transitions/tr9804/ Why do you reject "best science" knowing Chief Dombeck said this: "The responsible policy maker ought to seek out the best science, because ultimately that will yield the best result." Link to statement: http://whyfiles.org/247sci_politics/index.php?g=5.txt Why do you reject "best science" knowing Chief Robertson said this: "Let's keep it up and make sure our decisions reflect the best science." Link to statement: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_053856.pdf Why do you reject "best science" knowing Chief Tidwell said this: "We have some of the best science, and we need to make sure we're applying that." Link to statement: http://westinstenv.org/sosf/2009/06/19/tidwell-interviewed-by-the-missoulian/ [1-72]

- Comment #12: Supervisor Lovato, when your IDT members disagree with and reject the findings of hundreds scientists does this constitute "scientific consensus?" Please explain why you choose to rely on the knowledge of your IDT members and reject the "best science" recommendations of over 600 Ph.D. biological scientists. Please don't tell the public the scientist's statements aren't applicable because they are not site specific unless you omit all literature in your References section that is not specific to this timber sale. Please don't take inappropriate action that harms the natural resources in the post-fire landscape just because the USFS says you can. Think for yourself and do the right thing. Don't do something you will regret later. Amassing volume, spending all your NFTM funding this FY, and rewarding corporate America is not worth the massive resource damage you will inflict by selling this post-fire timber sale. The vast majority of caring, responsible wildlife biologists and forest ecologists who respect and use "best science" would refuse to be associated with a post-fire timber sale. Think about it. Post-fire timber sales have no beneficial natural resource effects. How can the IDT members sleep knowing they have supported a project that will cause major harm to some natural resources in order to provide corporate profit opportunities? Haven't the corporations in America destroyed enough of this country for money? Should a government agency be making their plunder possible? Are you all proud? Once again, what will the judge say? Please do the right thing for future generations of Americans. Don't allow corporate profit to influence your decision. I know USFS Responsible Officials never select the No Action alternative, however based on the clear adverse natural resource effects here it seems this would be a prudent thing to do. [1-91]

- Request for changes to be made to the final NEPA document: Abandon your plans to log the Moonlight post-fire landscape. [1-92]

- The commenter refers us to his Attachment #2 which states that: "The Following Compelling, Indisputable Science Authored by Experts Reveals Post-Fire Logging Will Inflict Major, Tragic Damage to the Natural Resources in and Downstream from the Burned Landscape … Especially Wildlife and Aquatic Resources." [1-96]

- The commenter refers us to his Attachment #14 which states that: "Dead and Dying Trees Resulting from Fire or Insect Activity are Important to the Survival of many Natural Resources in the Forest and must never be Removed to Provide Opportunities for Corporate Profit or to Produce Private Industrial Tree-Farm Conditions" [1-99]

**Response**

The commenters’ statements (supported most directly by Opposing Views Attachment #2) indicate that the project will conduct post-fire salvage logging activities. Salvage logging is interpreted as logging of salvage material post fire to capture revenue. Salvage logging is not proposed with the Moonlight Fire Restoration Project. Salvage logging was conducted under previous projects (as discussed on page 294 of the environmental assessment) and has been completed.
The proposed project seeks to restore changed landscape level conditions to vegetation, soils and other resources, and does not include salvage logging. There is mechanical thinning proposed within this project which would result in commercial harvest, but that is a different activity with differing effects than salvage logging because it is proposed in areas that were unburned or burned at low severity. Additionally, the objective of the mechanical thinning in the Moonlight Project is to reduce stand densities in overstocked stands, increase structural heterogeneity and adjust the current species makeup towards a more desired composition. This is decidedly different than a post-fire salvage project. A Timber Sale Contract (FS-2400) may be used to remove material but a Stewardship Contract (FS-6300) is just as likely. The choice of contract would be determined after final values for timber removal projects are determined. The use of these contracts and associated capture of revenue is being conducted to comply with the National Forest Management Act of 1976. The project is designed to comply with applicable management direction, but not intended for the sole purpose of producing revenue. Other activities that would cost money (service work) are proposed. Given the full context of the Moonlight Restoration Project proposed activities, overall, the project would restore ecosystem services and values that were degraded.

Opposing Views Attachment #14 presents research and viewpoints related to dead and dying trees, specifically related to fire or insect activity and states that these trees should not be removed. The Moonlight Fire Area Restoration project would remove dead trees that are a result of the Moonlight Fire of 2007, as well as others that have died in subsequent years for other reasons. Removals would include cutting of snags as well as piling of downed wood that is in excess of those amounts recommended by current management direction or by project level design features. The justification for removal is so that vegetation management activities can be safely conducted, including planting conifer seedlings and returning fuel levels to more historical norms. Downed wood and fuel levels in dry forests in this region of the United States are well documented in scientific literature and research, and guidance is provided for management direction (USDA 2004a, 2004b). Snags that present hazards to workers would be felled in compliance with applicable safety policies provided by Occupational Safety and Health Administration (OSHA). These activities have been included and analyzed in the project files.

Concern – In the environmental assessment, Forest Service analysts do not consider that natural resources benefits of wildfire.

- The commenter has referred us to Attachment #8 which states that: "The Natural Resources in the Forest Benefit from Fire" and includes several links to reference material [1-98]

Response

Opposing Views Attachment #8 presents research and viewpoints regarding natural resource benefits from fire. However, it relates some of these fire benefits directly to salvage logging, which as previously described is not proposed as part of the Moonlight Fire Area Restoration Project. Prescribed fire is proposed with all vegetation management activities, and the anticipated effects of prescribed fire are described in the analysis. The attachment presents some information that is outside the scope of this project, and is related to policy as well as higher level guidance. If authorized, the project would implement prescribed fire.

Concern – Opposing views that indicate timber harvest and associated road building will result in significant adverse effects should be considered.

- The commenter has referred us to Attachment #1 which states that: "The Following Compelling, Indisputable Science Reveals Timber Harvest Activities Will Inflict Major, Tragic Damage to the
Natural Resources in and Downstream from the Sale Area. The cutting Units and New Roads will also harm the Recreational Opportunities and Scenery." (See full attachment) [1-95]

- The commenter has referred us to Attachment #4 which states that "This Attachment Contains Scientific Conclusions from Research by Scientists not affiliated with the USFS. They all show that Road Construction Damages (and sometimes destroys) the Proper Ecological Functioning of some Essential Natural Resources in the Forest" (See full attachment) [1-97]

**Response**

Opposing Views Attachment #1 is related to timber harvest activities. This attachment presents research and viewpoints from clearcutting and timber harvest practices that are not authorized under current management direction for the Plumas National Forest, including clearcutting. This attachment also presents research and viewpoints related to salvage logging which is not proposed as part of this project. The commenter also directly mentions the NFTM fund, which is an appropriation. Activities associated with Moonlight Restoration project are part of a settlement fund, collected and set up to recover lost ecosystem services as a result of the Moonlight Fire of 2007. Attachment #1 focuses on presenting information related to timber harvest activities. Sale of commercial material would occur as a result of vegetation management activities (thinning of green trees) proposed as part of the Moonlight Fire Area Restoration Project, but conducting a timber sale is not the purpose of the project. Thinning green trees is proposed to reduce densities, so that residual stocking is within limits recommended by literature. The project-specific silviculture and vegetation report further discusses this research as well as associated thinning proposals. Attachment #1 nor the comments describe specific items from the project specific report, and so the context of Attachment #1 in relation to the proposed project is unclear.

Opposing Views Attachment #4 presents research and viewpoints on road construction. The Moonlight Fire Area Restoration Project does not propose any new permanent road construction. The effects of road reconstruction and maintenance and temporary road construction are considered in the environmental assessment. In addition, the project includes proposals to decommission system roads and obliterate non-system roads, reducing the overall effect of the transportation system in the project area, especially where roads are no longer needed or are causing resource impacts.

**Wildlife**

**Concern - The effects analysis doesn't appropriately consider the effects of logging and road building on aquatic wildlife and fisheries.**

- “Comment #7: Supervisor Lovato, after reading your pre-decisional EA its clear you reject the following scientific advice. Please assure the Chapter 3 effects disclosures for fisheries and aquatic habitat in your final EA explain why Dr. Ehrlich's, Dr. Foster's and Dr. Raven's conclusions below do not apply to the Plumas National Forest. "For much of the past century the Forest Service, entrusted as the institutional steward of our National Forests, focused its management on an industrial-scale logging program. The result of the massive logging and road construction program was to damage watersheds, destroy wildlife habitat and imperil plant and animal species." "The continued logging of our National Forests also wastes American tax dollars and diminishes the possibilities of future economic benefits. The Forest Service lost $2 billion dollars on the commercial logging program between 1992-1997. Annually, timber produces roughly $4 billion while recreation, fish and wildlife, clean water, and unroaded areas provide a combined total of $224 billion to the American economy. Forests purify our drinking water - 60 million Americans get their drinking water from National Forests. When the dramatic values of ecological goods and services are taken into account, it is clear that protecting National Forests creates more economic benefits than continued logging.” Ehrlich,
Response

All action types, including road building and multiple types of vegetation treatment, were considered in the analysis (biological evaluation, biological assessment, management indicator species report) for special status aquatic species. This analysis was summarized on pages 145-147 of the environmental assessment. Negative short-term (a few years) effects from project actions, such as increased sediment input, were acknowledged based on analysis from the project hydrology report. Project actions as a whole are expected to result in substantial improvements to existing road conditions (e.g., current poor drainage) in the longer term, as well as a decrease in road densities through decommissioning of multiple miles of existing roads. In addition, there are other forest roads projects proposed that partially overlap the Moonlight Fire Restoration Project area, and are also designed to reduce road densities and improve drainage, which would cumulatively improve watershed conditions. Therefore, the proposed actions, and other spatially overlapping projects, are expected to result in a substantial long-term improvement to riparian areas and aquatic habitat beneficial to all special status aquatic species.

Concern – Wildlife analysis should better consider the beneficial effects of the no action alternative.

- “Western bumble bee—”However, no action would result in further encroachment of conifers on the meadow and further densification of the forest, resulting in loss of suitable foraging habitat through shading out of flowering plant species.” Comment #1: This is crazy and shows whoever authored this effect disclosure will say anything to please Supervisor Lovato with volume. Removing dead and dying trees will not encourage encroachment of conifers on meadows. This is an unsubstantiated statement.” [1-56]

- “California spotted owl— ”The indirect effects of no action would include an increased risk for future wildfire and related impacts on habitat development and recovery. The fuel loads that would be left by this alternative would incrementally increase over time and potential wildfires in the area would continue to become more difficult to suppress. Stand-replacing wildfires in the future would likely eliminate spotted owl habitat from the analysis area in the long term. Rates of spread would increase incrementally as fuel conditions worsen over time.” Comment #2: I have never read such garbage. The IDT wildlife biologist is clueless about reburns. After viewing the EA cover photo of the burned landscape, even a lay member of the public would understand someone is lying when they say fuel loads will increase when dead & dying tree are left in place to replenish the organics on the soil when they fall. The IDT wildlife biologist as never watched a logging operation. The trees are felled and limbed which leaves fine fuels.” [1-57]

- “In Table 40 (pg 121) the IDT wildlife biologist indicates the hairy woodpecker and black-backed woodpecker are management indicator species for the Moonlight Fire timber sale. At page 121 he/she says there will be "No change to current stats and trends for management indicator species because no activities would occur." Woodpeckers depend on and thrive in post-fire conditions. Removing the dead & dying trees will eliminate these conditions, thus No Action will benefit the species.” [1-58]

Response

The commenter seems to be under the impression that the project would remove dead and dying trees in burned areas. This is not the case as the treatments proposed are primarily in unburned areas and are
removing live conifer. Snags are only removed as part of the aspen restoration and reforestation where needed for personnel safety.

Related to the analysis of western bumble bee, the proposed action includes the removal of live conifers that are currently encroaching aspen stands. The removal of these live conifers would reduce conifer encroachment, thus retaining more open habitat providing for pollinator species.

As for the comment on spotted owls, low- and moderate-severity burns can be beneficial, high-severity fire may negatively impact spotted owls. As demonstrated by the loss of 17 out of 18 spotted owl protected activity centers within the 2007 Moonlight Fire footprint, the effects of high-severity fire are likely only beneficial when in proximity to larger areas of unburned or low- to moderate-severity burned areas. Thus, under this alternative, suitable habitat for productive owl sites as a result of fire could become more fragmented or completely eliminated over time, and the abundance of owls in the wildlife analysis area could decline. Remaining conifer forest stands adjacent to the fire area are vulnerable to future high-severity fire events. Dailey and others (2008) found that 56 percent of protected activity center acres in adjacent unburned watersheds would likely burn at high severity. High density stands of small- and intermediate-sized trees combined with a heavy buildup of surface fuel are highly conducive to high-severity, stand-replacing fire events within the protected activity centers.

For the comment on black-backed woodpeckers, again, the commenter seems to be under the impression that the project would remove dead and dying trees in burned areas. This is not the case as the treatments proposed are primarily in unburned areas and are removing live conifer. Snags are only removed as part of the aspen restoration and reforestation where needed for personnel safety. As a result of the action alternatives, change in populations or population trends for black-backed woodpecker, and to the snags in burned forest ecosystem component with which they are associated should be minimal. Given the ubiquity of this ecosystem component across the bioregion, the small effects at the project level would not alter the bioregional trend in the ecosystem component, nor would it lead to a change in the distribution or population of black-backed woodpecker across the project area or the Sierra Nevada bioregion.

Concern – In the environmental assessment, Forest Service analysts should consider evidence provided that wildlife benefit from post-fire conditions and would be negatively impacted by the proposed action.

- “Wildlife biologists learn in college that burned forest landscapes represent exquisite, seldom seen, important wildlife habitat. The IDT wildlife biologist allowed the USFS to change their deeply held beliefs by convincing them "team players" must never, ever say anything critical about timber harvest and road construction. After hearing this for years some USFS employees (as is the case here) start to believe commercial logging is the most effective way to "restore: a forest and return it to health. It's sad. This shows money can buy anyone. The 9 minute June 2017 video called "A New Message for Smokey" available at the link below video contains a summary of the relationship between forest wildlife species and wildfires. The IDT wildlife biologist already knows this information and rejects it to please Supervisor Lovato. I hope the other IDT members view the video. When they do they will question why IDT wildlife biologist conveniently "forgets" real science that conflicts with USFS teachings. They will wonder why you don't wear your coveted "timber beast" hat openly and stop pretending you care about wildlife. http://wildlensinc.org/eoc-single/new-smokey-message/” [1-54]
- “ 540 independent Ph.D. scientists authored the following excerpt quoted in letter #1 below: "Rather than leaving plant material standing - and providing perching, nesting, and feeding sites for wildlife - such logging abruptly moves the material to the ground.” 249 independent Ph.D. scientists authored the following excerpt quoted in letters #2 and #3 below: "Post-fire conditions also serve as a refuge
for rare and imperiled wildlife species that depend upon the unique habitat features created by intense fire. "This post-fire renewal, known as "complex early seral forest," or "snag forest," is quite simply some of the best wildlife habitat in forests, and is an essential stage of natural processes that eventually become old-growth forests over time. This unique habitat is not mimicked by clearcutting, as the legislation incorrectly suggests. Moreover, it is the least protected of all forest habitat types, and is often as rare, or rarer, than old-growth forest, due to extensive fire suppression and damaging forest management practices such as those encouraged by this legislation."

"After a fire, the new forest is particularly vulnerable to logging disturbances that can set back the forest renewal process for decades. Post-fire logging has been shown to eliminate habitat for many bird species that depend on snags..." A real wildlife biologist would write a short effects disclosure for No Action that says the No action alternative will benefit all Threatened, Endangered and Sensitive Terrestrial Wildlife affected by the fire.” [1-59]

Response

The commenter seems to be under the impression that the project would remove dead and dying trees in burned areas. This is not the case as the treatments proposed are primarily in unburned areas and are removing live conifer. Snags are only removed as part of the aspen restoration and reforestation where needed for personnel safety. It should also be noted that the proposed action and alternatives only propose aspen and reforestation treatments on portions of the landscape affected by the Moonlight Fire and large amounts of burned area with snags and associated wildlife habitat would remain in the project area.

The environmental assessment includes analysis of the effects of the proposed action on wildlife habitat, in particular the analysis of effects to California spotted owl highlight the potential effects on snags, which are an important habitat component for this species (environmental assessment pages 56-57 and 126-132).

References Cited


USDA Forest Service. 2004a. Final Environmental Impact Statement for the Sierra Nevada Forest Plan Amendment. USDA Forest Service Pacific Southwest Region, Vallejo, CA
USDA Forest Service. 2004b. Record of Decision Sierra Nevada Forest Plan Amendment. USDA Forest Service Pacific Southwest Region, Vallejo, CA


https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd527853.docx
Appendix B – Errata to the Environmental Assessment

The following changes to the Environmental Assessment text serve to update with new information.

On page 185, replace:

- “Therefore, at this time, sufficient survey data is not available for the project area. During the summer of 2017, the proposed treatment units are being intensively inventoried for cultural and heritage resources as per the provisions within the Programmatic Agreement. Intensive inventory may not be possible in impenetrable brush fields or on steep slopes (30 percent or greater) due to accessibility and safety considerations.”

with the following:

- “Therefore, during the summer of 2017 additional surveys were conducted of the area of potential effect. A total of 29 archaeological sites were recently located and added to the known 52 sites previously recorded. Twenty-seven isolated finds were also found and recorded during the course of the 2017 inventory. An isolated find is defined as an artifact or group of artifacts for which all information potential has been exhausted through recording and no further information can be gained. The majority of the site types are related to historic sites such as can scatters, ditch segments, prospect pit, bridge, and trench prospect. There is also a large Lucky S Mining landscape. The only prehistoric sites are a prehistoric lithic quarry and arborglyphs.”

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