January 24, 2012

DECISION RECORD #3 FOR
SPENCER CREEK TREATMENTS EA #OR-014-08-09
PROJECT: SPENCER CREEK PROJECTS

INTRODUCTION
The effects of the forest management projects included in this Decision Record (DR) are analyzed in the Spencer Creek Treatments Environmental Assessment (EA) #OR-014-08-09. This EA analyzed multiple proposed actions in the Spencer Creek watershed with implementation proposed over a ten year period. It was anticipated that separate Decision Records would be prepared at the time specific projects were proposed. Two other decisions have been made on projects proposed in the Spencer Creek Treatments EA. This decision addresses silvicultural, fuel hazard reduction, road maintenance and watershed improvement actions.

The Klamath Falls Resource Area (KFRA) Interdisciplinary Team analyzed the projects based on: (a) current resource conditions in the project area, (b) the results of monitoring the previous decade of forest management and harvest activities, (c) meeting the purpose and need as identified in the Spencer Creek Treatments EA, (d) implementation of the management action and direction stipulated in the 1995 Klamath Falls Resource Area Resource Management Plan (RMP), and (e) comments from the public. The proposals presented and evaluated in the Spencer Creek Treatments EA reflect what the KFRA Interdisciplinary Team recommended to be the best balance and integration of resource conditions, resource potentials, competing management objectives, expressed interests of the various publics, and the concerns of surrounding communities.

In October 2010, I initially issued Decision Record #1 for the Replacement Gal Timber Sale. Because of concerns over that decision I withdrew it and the BLM entered into negotiations pertaining to the Replacement Gal Timber Sale with Klamath Siskiyou Wildlands Center (KS Wild) representing itself and two other groups, Cascadia Wildlands and Oregon Wild. In December 2010 the BLM and the groups named above reached an agreement that will be referred to in this Decision Record as “KSW Negotiated Agreement”. The negotiated agreement is available at the Klamath Falls Resource Area office and has been added to the EA as an appendix. As a result of the KSW Negotiated Agreement, the original 2010 version of the Replacement Gal Timber Sale was modified. The Replacement Gal Timber Sale Decision Record, dated August 17, 2011, became DR # 2 under the Spencer Creek Treatments EA.

The projects authorized with this Decision Record will be titled the “Spencer Creek Projects” and will be DR #3 under the Spencer Creek Treatments EA.
DECISION

It is my decision to implement the portions of the Proposed Action in the Spencer Creek Treatments EA, as modified by the KS Wild Agreement, which applies to forest management projects including vegetation management, fuel hazard reduction treatments, and watershed improvements. As part of this action, applicable Best Management Practices (BMPs) in Appendix D of the KFRA ROD/RMP and the Project Design Features (PDFs) in Appendix B of the EA will be applied. The approved action will result in the implementation of several forest management projects (see Map 1). Specifically, this decision will result in:

<table>
<thead>
<tr>
<th>Actions (Treatments)</th>
<th>Proposed Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Thinning</td>
<td>382 ac</td>
</tr>
<tr>
<td>Riparian Mechanical Thinning</td>
<td>30 ac</td>
</tr>
<tr>
<td>Manual Thinning</td>
<td>280ac</td>
</tr>
<tr>
<td>District Designated Reserve Manual Thinning</td>
<td>175 ac</td>
</tr>
<tr>
<td>Riparian Manual Thinning</td>
<td>40 ac</td>
</tr>
<tr>
<td>Conifer Tree Planting</td>
<td>280 ac</td>
</tr>
<tr>
<td>Broadcast &amp; Jackpot Prescribed Fire</td>
<td>373 ac</td>
</tr>
<tr>
<td>Piling and Burning of Treatment Units</td>
<td>Up to 1190ac</td>
</tr>
<tr>
<td>Improve Natural Fords</td>
<td>4</td>
</tr>
<tr>
<td>Culvert Replacement/Extension</td>
<td>3</td>
</tr>
</tbody>
</table>

Timber Sales
- There are no timber sales planned under this decision record.

Manual and Mechanical Thinning
- Understory trees (<20” diameter breast height (DBH)) would be thinned (cut and yarded to a loading point) to the density and stocking levels necessary to reduce competition for water and nutrients. Harvest would primarily consist of thinning of over-stocked stands and cultivating around large legacy trees. Legacy trees would include ponderosa pine, sugar pine, white pine, Douglas-fir and incense cedar trees larger than 20 inches DBH. Most of these treatments would be implemented by using either service or stewardship contracts. The focus for trees selected for removal is suppressed smaller trees within two drip lines of larger trees, trees judged unlikely to recover and thrive following harvest, and damaged residual trees. Trees may also be thinned (primarily in plantations) to reduce competition and to allow for the development of a more vigorous residual stand. Leave trees will include the healthiest and most vigorous trees, with a target stand composition objective as summarized in Appendix E of the RMP (p. E-10), and will be spaced 15-40 feet apart. The wider spacing will be used for larger leave trees and areas with lower site productivity.
- Mechanical thinning will include yarding of severed trees to a landing. This material will be utilized for firewood, biomass energy production, fiber, lumber production or other products.
- Brush removal using manual and mechanical techniques will generally be included in small diameter thinning areas.
- Manual thinning is identified for units where the slope and other factors preclude mechanical methods. Manual thinning and piling within the District Designated Reserve (DDR) will target overstocked white-fir trees 1 -10” DBH.
- Mechanical and manual thinning that takes place in Riparian Reserves and District Designated Reserve Buffers (DDRBs) will target the development and maintenance of late successional forest structure with the focus on retaining large trees and snags (RMP, p.18).

Conifer Planting
- Approximately 280 acres of under-stocked areas will be planted with conifer seedlings in the Spencer Creek project area; 80 acres of previously treated stands and up to 200 acres within or
adjacent to the commercial harvest units. These areas will be determined post treatment in order to target areas in need of re-stocking.

- Manual brushing may be necessary on planted units to ensure seedling survival. Areas needing brushing will be determined after seedlings are planted.

**Hazardous Fuels Treatments**

- Where operationally feasible, whole tree yarding of all material designated for mechanical removal will be done to reduce activity generated hazardous fuel loading.
- In all treatment areas (up to 1190 acres), residual materials will be treated with a variety of methods to reduce hazardous fuels including: whole tree yarding, hand and/or machine piling, lopping and scattering, and/or burning.
- Piles will be utilized for firewood, chips, hog fuel and/or other products, wildlife habitat, or burned.
- Broadcast burning (under-burning) and jackpot burning (burning of small piles or fuel concentrations) will be conducted on approximately 373 acres of harvest/treatment units (past and present) if residual fuel levels and/or conditions following treatment meet criteria for prescribed burning treatments. Such areas will be treated with prescribed fire as described in the Spencer Creek Treatments EA (pages 8 and 9).

**Roads/Watershed Improvement**

- Culvert replacement/extensions on three (3) culverts.
- Improvement of four (4) natural fords.

**Project Design Features**

- Wildlife - Northern Spotted Owl
  - Project Design Features (PDFs) pertaining to wildlife and wildlife habitat described in Appendix B of the Spencer Creek Treatments EA and the BMPs in the KFRA ROD/RMP applying to the planned actions, will be implemented for all actions conducted.
  - A seasonal restriction will be implemented during the nesting season (March 1-September 30) if northern spotted owls are found to be nesting. If non-nesting is determined during the critical nesting period, the seasonal restriction may be waived by the local biologist.

**Monitoring**

- The BLM will monitor soil impacts of ground disturbing operations implemented as part of the Spencer Creek EA to assure compliance with the KFRA Resource Management Plan on no less than 20% of the mechanically thinned areas.
- Vegetation treatments will be monitored.
- The KFRA annually monitors nesting status of all known northern spotted owl sites and will continue to monitor those sites in this project area.

**DECISION RATIONALE**

The decision to implement the projects described in the Proposed Action meets the Purpose and Need identified in the EA and furthers the intent established in the Klamath Falls Resource Area RMP to manage and protect resource values as described in the EA and other sections of this Decision Record. The forest development treatments covered in this decision record and the Proposed Action Alternative are the same as the forest development treatments in Alternative 1.

The No Action Alternative is rejected because it does not meet the resource management objectives identified in the 1995 Klamath Falls Resource Area RMP and the Northwest Forest Plan or the 2008 Klamath Falls RMP. It would not address or alter many of the existing conditions and trends relative to desired healthy vegetative conditions, resource protection, and watershed restoration that were identified.
in the EA. With No Action, these conditions would not be improved or mitigated; certain undesirable ecological trends would continue unchanged, and, in some cases, would be exacerbated with the passage of time. In addition, no thinning or fuels reduction benefits would be realized.

Other alternatives were also considered but were dropped from detailed analysis (see EA Appendix E) including Regeneration Treatments, Fuels Treatment Only, Citizens Action Alternative, and Restoration Treatments Only. These alternatives were rejected either because they would not meet one or more parts of the Purpose and Need for the project or because the actions proposed in these alternatives were included and analyzed in other alternatives.

**Surveys**
- Surveys for wildlife (great gray owl, northern spotted owl, northern goshawk, white-headed woodpecker, terrestrial mollusk) and botanical resources have been completed.
  - Great gray owl surveys were conducted (1996-1997; 2006-2007) within suitable habitat. No great gray owls were detected during these surveys.
  - Purposive (strategic) surveys for terrestrial mollusks were conducted in the spring of 2002 within the Miner’s Creek, East Miner’s Creek and Upper Spencer Creek LSRs. No survey and manage mollusks were located during these surveys.
  - Priority survey and manage mollusk habitat was delineated outside of the LSRs and within the commercial timber harvest units. These priority habitat areas were buffered and reserved from the commercial harvest activity. The remainder of the planned actions occur outside of priority mollusk habitat or would not adversely affect habitat for survey and manage mollusk species.
- Required cultural surveys are completed, no cultural resources were located.

**Mitigation**
No additional mitigation was deemed necessary and thus none was described in the EA or in this Decision Record.

**Consultation and Coordination**
Consultation with the U.S. Fish and Wildlife Service (FWS) as required under Section 7 of the Endangered Species Act (as amended) was completed for the Spencer Creek Treatments EA including the timber harvest described in decision record #2. For the timber sales, the BLM made a “May Affect, Likely to Adversely Affect” determination for the northern spotted owl due to the downgrading of suitable habitat to dispersal habitat within two spotted owl territories (Spencer Creek and Surveyor North). That reduction of habitat resulted in those territories dropping below habitat thresholds to maintain the spotted owls in those territories. The FWS concurred with this determination and issued a Biological Opinion (81450-2010-F0025) on August 03, 2010.

The actions proposed in this decision record do not involve timber sale activity and therefore would result in a “May Affect, Not Likely to Adversely Affect” determination for the remaining spotted owl territories in the project area. The Service concluded that the actions as proposed in this decision record would not jeopardize the continued existence of the northern spotted owl.

A “No Effect” determination was made for all other listed species and designated critical habitat.

The State Historic Preservation Office (SHPO) was notified of this project in accordance with 36 CFR §805.5(b). They have raised no objections to the BLM’s finding that it would not adversely impact sites of cultural or historic significance.
Public Involvement
Public scoping input and comments were considered in development and refinement of the proposed action and alternatives, and in this decision. Refer to Appendix B of this DR for scoping, EA and tour comments and BLM responses.

- **Initial Scoping**
  The KFRA requested public input on the Spencer Creek treatments in a letter mailed to “All Interested Persons” on April 4, 2008. This scoping letter outlined the proposed treatments for the analysis area and was mailed to approximately 110 persons and groups on KFRA’s NEPA mailing list. Three response letters were received, some representing multiple groups and/or individuals.

- **EA Comments**
  Upon completion of the EA, the public was notified on May 28th, 2010 and given an opportunity to comment on the EA during a formal thirty (30) day public comment period. Five written comments (emails) from various organizations and individuals were received.

- **2010 Field Tours**
  On June 10, 2010, the Klamath Falls Field Office conducted a public tour of two Environmental Analysis areas, one was the Spencer Creek Treatments EA area including the proposed Replacement Gal and Spike Timber Sales. Three members of the public attended the tour and provided comments.

  On October 22, 2010 the BLM conducted another public tour of the Replacement Gal Timber Sale Area and a future EA analysis area.

- **BLM Actions Pertaining to Comments Received**
  Initial scoping comments were considered in the development of the EA and alternatives. None of the later EA and Field Tour comments were of a nature to cause the interdisciplinary team to revise the Environmental Assessment. However, they were considered in sale layout, development of silvicultural prescriptions and in this Decision.

- **Negotiated Agreement**
  On December 1, 2010 the KFRA Field Office Manager and other members of the Klamath Falls Resource Area staff met with a representative of environmental groups that were potentially litigating the Replacement Gal Timber Sale. The BLM and said representative negotiated an agreement that modified the original Replacement Gal Timber Sale and withdrew litigation.

  The agreement included changes to sale units and acres, and modification of silvicultural prescriptions. The Spencer Creek EA No. OR-014-08-09 Agreement is available for review at the Klamath Falls Resource Area office.

**CONCLUSION**

**A. Consideration of Public Comments**
I have reviewed the public comments summarized above and have discussed them with the interdisciplinary team of specialists on my staff. The Spencer Creek Treatments EA and this DR contain the requisite site specific information to implement the proposed actions. The comments received do not provide any substantially new information or new analysis. Nor do they identify substantial new data gaps that would indicate additional analysis is needed. Finally, the comments do not identify any significant new data which would alter the effects described in the EA. I am confident that the Spencer Creek Treatments EA plus the supplemental information, including responses to public comments contained in this DR, in addition to the more comprehensive analysis done in the Klamath Falls Resource Area
RMP/EIS to which the EA is tiered, represents a thorough analysis of potential effects associated with the Spencer Creek Projects identified in this DR.

**B. Plan Consistency**
Based on the information in the Spencer Creek Treatments EA and in the record, I conclude that this action is consistent with the 1995 Klamath Falls Resource Area Resource Management Plan. The action will help to move this portion of the landscape towards the desired future condition considered in development of the 1995 RMP.

Following the March 31, 2011 decision by the United States District Court for the District of Columbia in Douglas Timber Operators et al. v. Salazar, which vacated and remanded the administrative withdrawal of the Klamath Falls 2008 ROD and RMP, the KFRA evaluated this project for consistency with both the 1995 RMP and the 2008 ROD and RMP. Based upon this review, I have determined that the selected alternative is consistent with the 1995 ROD/RMP and the 2008 ROD/RMP. Although the selected alternative contains some design features not mentioned specifically in the 2008 ROD/RMP, these design features are consistent with the ROD and RMP.

The actions will comply with the Endangered Species Act, the Native American Religious Freedom Act, cultural resource management laws and regulations, and Executive Order 12898 (Environmental Justice). This decision will not have any adverse effects to energy development, production, supply and/or distribution (per Executive Order 13212).

**C. Finding of No Significant Impact**
No significant impacts were identified. No impacts beyond those anticipated in the KFRA RMP/EIS would occur. Refer to the accompanying Finding of No Significant Impact.

**D. Summary**
In consideration of public comments, the conformance with the RMP, and the finding that there would not be any significant impacts, this decision allows for vegetation management projects including plantation and small diameter thinning, riparian reserve thinning, conifer planting, plantation brushing, road maintenance and culvert and stream crossing improvements.

As outlined in 43 CFR § 5003 Administrative Remedies at § 5003.3 (a) and (b), protests may be made within 15 days of the publication date of a notice of sale. Publication of such notice in the Klamath Falls Herald and News, Klamath Falls, Oregon constitutes the decision date from which such protests may be filed. Protests shall be filed with the authorized officer and contain a written statement of reasons for protesting the decision.

43 CFR 5003.3 subsection (b) states: “Protests shall be filed with the authorized officer and shall contain a written statement of reasons for protesting the decision.” This precludes the acceptance of electronic mail or facsimile protests. Only written and signed hard copies of protests that are delivered to the Klamath Falls Resource Area office will be accepted.

---

**Donald J. Holmstrom**
Donald J. Holmstrom, Manager  
Klamath Falls Resource Area  
Lakeview District, Bureau of Land Management  

**January 24, 2012**
Date
APPENDIX A

2001 ROD COMPLIANCE REVIEW: SURVEY & MANAGE WILDLIFE AND BOTANY SPECIES

Environmental Analysis File
Lakeview District BLM – Klamath Falls Field Office

**Project Name:** Spencer Creek Projects  
**Prepared By:** Steve Hayner

**Project Type:** Road crossing improvements, culvert installation, prescribed burning, mechanical and manual thinning, conifer planting

**Date:** 11/10/11

**Location:**

<table>
<thead>
<tr>
<th>Township</th>
<th>Range</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>38S</td>
<td>5E</td>
<td>15, 16, 23, 25, 26, &amp; 36</td>
</tr>
<tr>
<td>38S</td>
<td>6E</td>
<td>19, 20, 24, 25, 28, 29, 30, 33, 34, &amp; 35</td>
</tr>
<tr>
<td>39S</td>
<td>5E</td>
<td>1</td>
</tr>
<tr>
<td>39S</td>
<td>6E</td>
<td>4, 5, &amp; 6</td>
</tr>
</tbody>
</table>

**S&M List Date:** January, 2001 with updates from 2011 S&M Settlement Agreement (July 2011)

Species listed below were compiled from the 2001 Record of Decision and include those vertebrate and non-vertebrate wildlife and non-vascular and vascular botanical species whose known or suspected range includes the Klamath Falls Resource Area according to the protocols listed below. There are no known sites for Category B, D, E, and F species. (Refer to Table A - Survey & Manage Wildlife and Botany Species.)

- Survey Protocols for Survey and Manage Strategy 2 Vascular Plants Version 2.0 (December 1998)
- Management Recommendations for Survey and Manage Lichens Version 2.0 (March 2000)
- Survey and Manage Protocols Protection Buffer Bryophytes 2.0 (1999)
- Handbook to Strategy 1 Fungal Species in the Northwest Forest Plan (PNW-GTR-476 October 1999), and Handbook to Additional Fungal Species of Special Concern in the Northwest Forest Plan (PNW-GTR-572 January 2003)
- Survey Protocol for the Great Gray Owl within the Range of the Northwest Forest Plan v3.0 (Jan. 2004)
- Survey Protocol Aquatic Mollusk Species From the Northwest Forest Plan Version 2.0 (Oct. 1997)
- Updated Survey and Manage list from Settlement Agreement Conservation Northwest v. Sherman No. 08-1067-JCC (W.D. Wash) (July 2011).

**Statement of Compliance**

Pre-disturbance surveys and management of known sites required by protocol standards to comply with the 2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines (2001 ROD were completed...
for the great gray owl. Some project areas proposed for treatment under this EA have not been specifically surveyed for S&M terrestrial mollusks. The terrestrial mollusk protocol (USDA/USDI 2003) identified priority habitat for surveying for specific species. Using this protocol the Bureau of Land Management (BLM) identified priority habitat for the species, and will avoid the habitat to prevent impacts. Priority habitats will be identified, buffered and removed from the proposed vegetation treatments that would be considered habitat disturbing (i.e. timber harvest). This methodology to identify habitat and avoid disturbance meets the 2001 S&M ROD by assuming occupancy within priority habitat and protecting its microsite characteristics. The proposed project also complies with any site management for any Category B, D, and E species as identified in the 2001 ROD (as modified): no sites of any of these species (B, D, E) is present in the project area.

Based on the survey results, there are currently no known sites of Survey & Manage species that require management within the project area. Therefore, based on the information (Table A) regarding the status of surveys for Survey & Manage wildlife species and the results of those surveys, it is my determination that the Spencer Creek environmental assessment complies with the provisions of the 2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines (a2001 ROD).

Donald J. Holmstrom            January 24, 2012
Manager                          Date
Klamath Falls Field Office
<table>
<thead>
<tr>
<th>Species</th>
<th>S&amp;M Category</th>
<th>Survey Triggers Within Range of Species?</th>
<th>Contains Suitable habitat?</th>
<th>Project may negatively affect species/habitat?</th>
<th>Survey Results</th>
<th>Survey Date Month/ year</th>
<th>Sites Known or Found?</th>
<th>Site Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertebrates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great Gray Owl (Strix nebulosa)</td>
<td>A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1996-1997</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>Mollusks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chace Sideband (Monadenia chaceana)</td>
<td>B</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>0</td>
<td>Buffered all priority habitat</td>
</tr>
<tr>
<td>Crater Lake Tightcoil (Pristiloma arcticum crateris)</td>
<td>A</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>0</td>
<td>Buffered all priority habitat</td>
</tr>
<tr>
<td>Evening Fieldslug (Deroceras hesperium)</td>
<td>B</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>0</td>
<td>Buffered all priority habitat</td>
</tr>
<tr>
<td>Fluminicola no. 3</td>
<td>A</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>#</td>
<td>N/A</td>
</tr>
<tr>
<td>Fluminicola no. 1</td>
<td>A</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>#</td>
<td>N/A</td>
</tr>
<tr>
<td>Vascular Plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cypripedium fasciculatum</td>
<td>C</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2004</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>Cypripedium montanum</td>
<td>C</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2004</td>
<td>0</td>
<td>No</td>
</tr>
</tbody>
</table>

1 Pre-disturbance surveys for great gray owls are required since there is suitable nesting habitat within the project area. The required habitat characteristics of suitable habitat include: (1) large diameter nest trees, (2) forest for roosting cover, and (3) proximity [within 200m] to openings that could be used as foraging areas (Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0, January 12, 2004). Surveys for the great gray owl were conducted in 1996-1997 using the 1995 protocol and in 2006 and 2007 using the 2004 protocol, both designed to meet Survey and Manage standards including the 2001 Survey and Manage Standards and Guidelines. Survey protocols used were “Great Gray Owl Survey protocol (1995)”, and “Survey protocol for the Great Gray Owl within the Range of the Northwest Forest Plan (2004).” No great gray owls were located.

2 Equivalent-effort pre-disturbance surveys are required for the Chace Sideband (IM-OR-2004-034). (Survey Protocol for S&M Terrestrial Mollusk Species v3.0, 2003). Priority habitat for Chace sideband on the KFRA is rocky outcrops, talus slopes and rocky areas within forest stands. This habitat was removed and buffered from the timber harvest area.

3 Suitable habitat for the Crater Lake tightcoil is “perennially wet situations in mature conifer forests, among rushes, mosses and other surface vegetation or under rocks and woody debris within 10 meters of open water in wetlands, springs, seeps and riparian areas…” (pg. 43, Survey Protocol for S&M Terrestrial Mollusk Species v3.0, 2003). This habitat was removed and buffered from the timber harvest area.
The evening field slug’s range was extended to include the KFRA in March 2003 (pg 2 and 3 2002 Annual Species Review and Appendix A pg32., Survey Protocol for S&M Terrestrial Mollusk Species v3.0, 2003). This species may be found in perennial moist situations in mature conifer forests or meadows amongst rushes, mosses and other surface vegetation or under rocks or woody debris within 10 m of open water in wetlands, springs, seeps, and streams. This habitat was removed and buffered from the timber harvest area.

Surveys for Cyperpidium fasciculatum and Cypripediium montanum were conducted in 2004 within the project area. No sites were found.
APPENDIX B

SPENCER CREEK TREATMENTS EA AND PUBLIC TOUR COMMENTS AND RESPONSES

Following, are responses to paraphrased comments from the initial scoping, EA comment period and Public Tours. These comments include comments regarding timber sale units from the EA that are not part of this decision record.

Roads and ORV/ATV Use

**Issue:** Reduce impacts of the road system. Roads in the project area cause or contribute to adverse impacts to streams, soil, wildlife and vegetation. Existing roads should be removed to reduce road densities down to 1.5 miles per square mile as recommended in the WSA.

**Response:** The BLM recognizes the impacts associated with existing roads and road construction in the Soils, Hydrology and Water Quality sections of the EA (EA pages 10 and 43-48). No new road construction is planned under the Spencer Creek Treatments EA. During the last ten years, many segments of road have been closed or obliterated in the analysis area. Analysis of the road system for the current EA concluded that there is little opportunity for further reductions in existing roads. However, analysis and public comments indicated that there were segments of currently closed roads that had ineffective barriers. The barriers had been illegally removed or were being driven around. These road segments will be reblocked and the barriers will be improved to prevent vehicle access.

The BLM has conducted extensive restoration efforts in the Spencer Creek Watershed. In the recent past the BLM, in cooperation with adjacent landowners, has undertaken efforts to improve and restore portions of the Spencer Creek Watershed in the analysis area. A summary of cooperative restoration actions taken or planned is available at the KFRA Office. The summary is titled “Watershed Restoration Treatments Implemented and Planned in the Spencer Creek Watershed”. It includes actions implemented and planned by the BLM, US Forest Service and private landowners.

Within BLM’s scope of authority under our long standing O&C Reciprocal Right-of-Way agreement that guides road management issues on western Oregon O&C lands, the KFRA BLM has worked to reduce road densities on BLM lands in the Klamath Falls Resource Area including roads within the Spencer Creek Watershed (See page 43 of the 2009 Annual Program Summary and Monitoring Report (APS)). Under the Upper Spencer Creek EA (OR-014-03-03) Decision Record # 2 signed 11/19/03, the KFRA BLM decommissioned 0.5 miles of road, obliterated 2.4 miles of road, installed two gates to close 0.5 miles of road, removed three stream crossings, and placed large woody debris in 0.25 miles of ephemeral/intermittent stream channels. This included collaboration and cooperation with adjacent landowners in the Spencer Creek watershed. Those landowners also blocked and obliterated several miles of roads on their lands. Two existing segments of roads totaling approximately 0.5 miles were also relocated outside of riparian reserves in the analysis area. Several additional miles of private roads adjacent to and connecting with BLM roads were closed and/or obliterated in the Spencer Creek Watershed through BLM cooperation with US Timberlands and the Rocky Mountain Elk Foundation.

In 2008 and 2009 additional large wood was placed in Spencer Creek for habitat restoration on BLM and private lands within the analysis area (see Spencer Creek Restoration Treatments EA, #OR-014-04-08). The logs were place in approximately seven miles of Spencer Creek including BLM and Private lands. Approximately 270 large cull logs were collected from past timber sale areas and slash accumulations on BLM and private lands for this purpose.

**Issue:** Construction of landings and reopening currently closed roads will result in increased “Equivalent Roaded Area”.

Response: All of the units scheduled to be harvested will include the use of existing skid trails and landings. Two currently blocked roads will be temporarily re-opened for use during harvest activities. These roads will be closed again when harvest activities are completed. Efforts will be made to ensure closures are effective.

Because we are using existing roads that are considered part of the permanent road system, overall roaded area should not increase as a result of the Replacement Gal Timber Sale or other actions proposed in the Spencer Creek Treatments EA.

Issue: BLM road closure mechanisms may not actually prohibit motorized traffic.
Response: The BLM has also recognized this situation and has identified two closed roads in the analysis area that had closure mechanisms which are no longer functional. The existing barriers have been moved or driven around. Both of these roads are going to be used during the Replacement Gal Timber Sale. Upon completion of the Replacement Gal timber Sale activities, both will be re-blocked with more substantial barriers and the BLM will place the barriers in strategic places to prevent motorized access.

Issue: We are extremely concerned about construction of new roads as part of this project. No new roads should be constructed. Currently closed roads should not be reopened for use.
Response: No alternative in the Spencer Creek Treatments EA proposes new road construction. No new road construction will be accomplished during the Replacement Gal Timber Sale or other vegetation management projects.

Approximately 0.75 miles of currently closed roads will be reopened for use during sale activities. These reopened roads are needed in order to reduce the length and overall amount of skid trails used to yard trees to landings. Temporarily reopening the closed roads will result in less overall impacts to soil and water than requiring excessive yarding distances. These roads will be closed following completion of sale activities. See previous issue and responses to road closure questions.

Issue: ORV use and abuse in the project area is having a continuing significant impact on the human environment and must be analyzed.
Response: The majority of the BLM lands within this treatment area are heavily forested with little opportunity for off road ATV access. While ATV and ORV access off of existing open roads is possible in some areas and are of concern for BLM, the BLM is not aware of BLM lands receiving significant off road use within the analysis area. As described above, physical barriers on two previously blocked roads in the Replacement Gal Timber Sale area are currently not effective and some motorized use is occurring on these two roads. Upon completion of harvest activities, these two roads will be re-blocked with more significant barriers and the BLM will place the barriers in strategic places to discourage motorized access.

Issue: OHV/ATV roads/trails and access should be reduced particularly at the mouth of Spencer Creek.
Response: The BLM manages no lands within approximately five miles of the mouth of Spencer Creek. All land in this area is private and the BLM exercises no management authority on lands near the mouth of Spencer Creek. Although “Spencer Creek” is part of the title of the Spencer Creek Treatments EA, the analysis does not propose any projects or activities in the vicinity of the mouth of Spencer Creek or immediately adjacent to the creek.

Past Timber Sales and restoration projects have significantly reduced road densities in the Spencer Creek Watershed on both BLM and adjacent private lands (see Spencer Creek EA, Kakapoo EA, and discussion in response to the first issue under “Roads and ORV/ATV Use” above).

Issue: Convert an abandoned rock quarry for use as a “rock crawling” OHV play area.
Response: This was identified as an additional treatment currently proposed on BLM lands in the planning area and considered as a reasonably foreseeable future action; however, the rock quarry development was not analyzed directly in this EA.

A potential “rock crawling” area near Clover Creek is being analyzed in the Lost EA #OR-LO14-2011-001 scheduled for completion in 2012.

NEPA
Issue: The Spencer Creek Treatments EA analyzed an inadequate range of alternatives.
Response: The KFRA ID Team did consider a wide range of alternatives in the Spencer Treatments EA including the two analyzed action alternatives and several that were not analyzed in detail (see Appendix E of the EA). Alternatives not analyzed in detail included the Citizens Action Alternative, a Regeneration Harvest Alternative and a Spotted Owl Habitat Retention Alternative. Rational for not considering those alternatives in detail is included in Appendix E of the EA.

Issue: Why was the “Citizens Action Alternative” as proposed in initial scoping comments not analyzed?
The Citizens Action Alternative as proposed in initial scoping comments included:
- commercially thin plantations to increase vigor and provide wood fiber to meet intent of LRMP
- reduce fuels in project area
- thin small trees in overly dense stands
- retain remaining late-successional forests and large diameter trees (over 20 inches DBH)
- avoid regeneration harvest
- upgrade existing roads
- reduce road density

Response: The Citizen’s Action Alternative was considered by KFRA’s ID Team (see EA Appendix E). It was not analyzed in detail because most of the action items proposed in it were considered as parts of the Proposed Action. The Proposed Action did include:
- thinning of several commercial and non-commercial sized plantations
- fuels reduction through thinning, harvest and fuel treatments including whole tree yarding, lop and scatter, prescribed burning and burning of excess slash/fuels
- retention of the vast majority of large diameter trees (approximately 99% of trees designated to be harvested are 24 inches DBH and smaller)
- regeneration harvest was not part of the Proposed Action but was considered under one of the alternatives. Regeneration harvests will not be implemented as part of the Replacement Gal Timber Sale.
- upgrading roads, including road maintenance, renovation and culvert replacement are part of the Proposed Action

Although not specifically covered in the EA, through the negotiated agreement with KS Wild, the no harvest of “large” trees was partially addressed. The BLM agreed not to harvest preferred tree species 22 inches DBH and larger in the NRF habitat and limit harvest of those trees in the dispersal habitat areas. “Preferred tree species” include ponderosa pine, sugar pine, white pine, Douglas-fir and incense cedar.

Regarding “decommissioning/obliteration of additional roads”, analysis of the existing road system indicated that the currently existing roads in the Replacement Gal Timber Sale area are needed to allow for feasible harvest operations. As discussed above, the BLM will close any roads re-opened for the timber sale and any currently closed roads that have been opened by the public. Several miles of roads in the analysis area have been closed or decommissioned in the previous ten to 15 years. Information about these roads and additional restoration activities in the Spencer Creek Watershed is available at the KFRA office.
Cumulative Impacts

Issue: The EA did not provide a thorough cumulative impact analysis of the proposed logging and road construction in combination with other federal logging and private logging activities and ORV use.

Response: The Spencer Creek Treatments EA tiers to the KFRA RMP/EIS. The assessment addressed direct, indirect, and cumulative effects of each action associated with the proposed timber sale and fuel treatments. The EA includes a Cumulative Impacts sections under the Environmental Consequences sections of all resources impacted by the Replacement Gal Timber Sale. The Cumulative Impacts sections analyze past, present and reasonably foreseeable future actions on BLM and adjacent private lands.

Again, no road construction is proposed in the Spencer Creek Treatments EA or the Replacement Gal Timber Sale.

Vegetation

Issue: Large diameter trees in the riparian reserves should not be logged in order to facilitate yarding.

Response: Assuming that this issue refers primarily to cable corridors, the Replacement Gal Timber Sale and Spencer Creek EA include no cable logging and no need to locate such corridors in riparian reserves or log large diameter trees in riparian reserves. Ground based yarding also will not require logging of large diameter trees in riparian reserves.

In the plantation thinning units of the timber sale, Units 19-1, 19-2, and 19-3, thinning of commercial sized plantation trees will occur in the outer half of the riparian reserves. No large trees will be removed from these riparian reserves.

Issue: We urge the BLM to avoid regeneration logging in this watershed. Regeneration harvest and group selection harvest is inappropriate in this watershed.

Response: No “regeneration” harvests are planned in the Replacement Gal Timber Sale or the Spencer Treatments EA. Regeneration harvests were considered in the Spencer Creek Treatments EA but dropped from analysis because other silvicultural treatments accomplish the purpose and need and in part, because collaboration with the public has suggested that variable density thinning would be a preferred management strategy (see Appendix E of the EA).

Three small patch cuts are included in the Replacement Gal Timber Sale and were analyzed in the EA. These patch cuts could be interpreted as being similar to “group selections”. Patch cuts are limited in size to five acres or less and are designed to promote maintenance/restoration of desirable tree species that require openings and higher levels of sunlight to regenerate. In the sale areas most historical stands included significant levels of sugar pine, ponderosa pine and Douglas-fir as evidenced by many existing large stumps of these species. Most of these areas are now dominated by shade tolerant second growth white fir with remnant pines and Douglas-fir (BLM stand exams and Precruise plots 2009-2011).

Not all of the trees are removed from the patch cuts. Patch cuts will retain five to ten trees per acre. In addition, preferred species (ponderosa pine, sugar pine, western white pine, Douglas-fir and incense cedar) and large diameter trees will be retained in the patch cuts.

Per the KS Wild Negotiated Agreement, no patch cuts will be implemented in NRF habitat areas. The three patch cuts implemented in the Replacement Gal Timber Sale total 13 acres and are designated in dispersal habitat areas with the purpose to reestablish shade intolerant species, particularly pines and Douglas-fir.

Issue: Logging stands down to as low as 40 square feet of basal area per acre as proposed in the EA will dramatically impact canopy closure, peak flows, wildlife, nutrient cycling, and fire hazard.
**Response:** The EA does consider reducing stand densities through variable density thinning in some places to as low as 40 square feet of basal area. The rationale was to create some open areas to restore desirable tree species which require higher levels of sunlight. However, given concerns expressed regarding the low basal area, the range of variable density thinning prescribed in the Replacement Gal Timber Sale was modified to include a low range of 80 square feet of basal area (Replacement Gal Timber Sale Prescription and Marking Guidelines, July 12, 2010, available at the KFRA).

**Issue:** We do not support logging in late-successional forests, particularly heavy thinning, shelterwoods or regen harvests.

**Response:** No regeneration harvests are planned for the Replacement Gal Timber Sale.

The three Patch Cuts (13 acres) designated in the dispersal habitat, could be considered similar to shelterwoods but on a very small scale. In addition, as per the KSW Negotiated Agreement, in NRF habitat no patch cuts will be implemented and no preferred species 22 inches in diameter and larger will be harvested. In dispersal habitat, harvest of preferred species larger than 22 inches in diameter will be minor (see Graphs 1 and 2).

The Replacement Gal Timber Sale will primarily harvest small and mid diameter trees through a variable density management prescription as indicated in Graph 1 and Graph 2 below. Approximately 99% of the trees designated for harvest in the Replacement Gal Timber Sale are 24 inches DBH and smaller. Although some larger diameter trees are designated for harvest under uneven-aged management as directed in the KFRA RMP ROD (page 22), the sale clearly does not target larger diameter trees.

**Issue:** Consider diameter limits when developing thinning prescriptions. All large (20 inches DBH and larger) diameter trees should be retained.

**Response:** The KFRA manages most forested stands under an uneven-aged system as directed by our RMP (RMP ROD page 22). This is generally accomplished with variable density management prescriptions and some small group selections or patch cuts. In order to maintain uneven-aged forests, The Variable Density Management prescriptions implemented on the KFRA are designed to harvest mostly smaller and mid diameter trees while protecting and maintaining most of the larger trees. However, trees from all diameter classes can be harvested to maintain uneven-aged stand conditions. The KFRA ROD/RMP (page E-3) specifies that “…trees in all size classes are eligible for thinning in order to reduce stocking to site capacity.” According to stand exam and timber cruise plot data, the great majority (approximately 99%) of the trees designated for harvest under the Replacement Gal Timber Sale, are 24 inches DBH and smaller and approximately 95% of the trees designated for harvest are 20 inches DBH and smaller (see graphs 1 and 2 below). The average diameter of the timber stands within the Replacement Gal Timber Sale will increase following harvest. The BLM’s intent is not to cut all or most of the large trees.

Due in part to public concerns regarding harvesting of larger trees that were expressed in various comments, efforts were made to reduce the number of larger trees designated for harvest. Silvicultural prescriptions were modified to reduce the number of large trees harvested. In regard to large trees, only trees with specific silvicultural reasons for removal were designated for harvest. Some of these reasons include removing diseased and insect infested trees and removing white fir trees that are directly competing with underrepresented and more desirable tree species including larger sugar pine, ponderosa pine and Douglas-fir.

The Final Negotiated Agreement, as noted above, restricts harvest of preferred species (sugar pine, ponderosa pine, and Douglas-fir) 22 inches and larger in all NRF habitat. The agreement also discourages harvest of preferred species 22 inches and larger in dispersal habitat.
The KFRA monitors stand structure and forest conditions on an annual basis (see 2007 Annual Program Summary and Monitoring Report pages 75 to 119 and 2009 APS pages 75 to 120).

The KFRA believes that the current uneven-aged and variable density management prescriptions are meeting the multiple RMP objectives for Matrix lands and the purpose and need of the EA.

**Issue:** We oppose upper diameter limits on designated (to harvest) timber and support harvesting of larger diameter trees where necessary to meet stand objectives (removal of mistletoe affected trees, etc.).

**Response:** No diameter limits were originally proposed for the Replacement Gal Timber Sale and are not typically included in KFRA uneven aged prescriptions. The KSW Negotiated Agreement of December 1, 2010 did include language that limits harvest of larger diameter (22.0 inches DBH and larger) preferred species (Douglas-fir, ponderosa pine, sugar pine, white pine and Incense cedar) in NSO NRF habitat. Very few large trees in the preferred species mix were originally designated for harvest. In NRF habitat those trees have been dropped from harvest. No diameter limits will be implemented for non-preferred species (white fir and Shasta Red Fir). However, large old true firs are not the target of this unevenaged prescription (see Cut and Leave Graphs 1 and 2 above).

**Issue:** The BLM should use patch cuts to eradicate root rot and encourage pine regeneration.

**Response:** The BLM is using patch cuts to encourage regeneration of shade intolerant species such as ponderosa pine and Douglas-fir. Three patch cuts totaling 13 acres will be implemented in the Replacement Gal Timber Sale.

Patch cuts are not being used in the Replacement Gal Timber Sale to eradicate root rot. Although some root rot areas exist in the sale area, the restrictions on size and purpose for patch cuts do not allow their use for root rot treatment.

**Issue:** We encourage marking the stand down to the basal area identified in the EA. This will have the added benefit of decreasing logging costs which will give the sales a better chance of selling in a very challenging market.

**Response:** The BLM implements quality control plots to assure achievement of basal areas prescribed in the silvicultural prescription and marking guidelines. Basal areas retained are purposefully designed to be variable. However, as described above, general stand thinning to basal areas of 40 will not be implemented in the Replacement Gal Timber Sale.

**Issue:** Avoid spread of noxious weeds

**Response:** Implementation of the BMPS and PDFs addressing noxious weeds included in Appendix B of the EA will be reduce or avoid spread of noxious weeds (EA page 73).

**Fire and Fuels Treatment**

**Issue:** Harvest activities increase rather than decrease fire hazard. Thinning may increase fire hazard by increasing surface fuels, changing the forest microclimate, and increasing growth of surface and ladder fuels.

**Response:** The EA includes several measures including whole tree yarding, lop and scatter, pile burning, slash utilization and potentially underburning to reduce slash levels and fire hazard (see EA pages 3, 8-10 and Appendix B). According to timber marking and pre-cruise data, the majority of the trees harvested will not be large, fire resistant trees. Instead, the harvest is concentrated on smaller trees with approximately 99% of the trees designated for harvest being 24 inches DBH and smaller.

Harvesting of trees can increase wildfire risks through accumulation of slash and changes in canopy cover. However, the Replacement Gal Timber Sale includes several fuels reduction treatments that when
used together will minimize the generation of activity fuels and reduce fire severity and risks. The treatments include: all trees harvested will be “whole tree” yarded (the tops and attached limbs will be removed from the woods and yarded to landings), residual slash accumulations will be lopped and scattered to break up fuel concentrations and arrangements, and some slash concentrations will be piled for later chipping or burning.

One of the objectives of the proposed action is to thin fuels to reduce the potential of a stand-replacing fire while maintaining sufficient canopy to meet wildlife and other resource objectives. Recent findings have validated that thinning of forested stands can reduce hazardous fuels and fire intensities. The Cone Fire occurred on September 26, 2002 within the Blacks Mountain Experimental Forest on the Lassen National Forest. The fire was unique in that it burned into several mechanically thinned and underburned units. The fire effects changed from predominately a stand replacing crown fire in the unthinned area to a ground fire with lower intensities when it reached the thinned units. More trees survived in the thinned unit than in the unthinned unit (Jablonski, October 2003). The proposed Replacement Gal Timber Sale treatments are similar in design to other thinning/fuel reduction treatments implemented on the KFRA.

In addition, prescribed underburning will be implemented to further reduce fuel loads where accumulations occur. As a result of all actions proposed including harvesting and thinning, wildfire severity and risk is not expected to increase.

Issue: Establishing young plantations can increase fire hazard and reduce ability to control fires.
Response: The EA and the Replacement Gal Timber Sale do not propose establishment of plantations through regeneration harvests or large patch cuts. No large or continuous plantations will be created by the Replacement Gal Timber Sale or other actions proposed in the Spencer Creek Treatments EA. Patch cuts under these projects are limited to five acres or less in size. Nine patch cuts were originally designed into the Replacement Gal Timber Sale totaling approximately 30 acres. In response to public comments expressing concerns about patch cuts in spotted owl NRF habitat and the December 1, 2010 KSW Negotiated Agreement, all patch cuts in NRF have been dropped. The remaining three patch cuts in dispersal habitat now total approximately 13 acres.

In addition, patch cuts are not intended to establish plantations. The three patch cuts are widely dispersed and range in size from three to five acres. Patch cuts do not remove all of the trees within the patch cuts. Five to ten large trees per acre will be retained in the patch cuts and all healthy representatives of desirable tree species will be retained. Patch cuts are designed to promote regeneration of tree species like sugar pine, ponderosa pine and Douglas-fir that require more sunlight than species such as white fir and Shasta red fir. In some areas most of these desirable trees have been removed (as indicated by existing large stumps) by past management activities and the sites are now dominated by second growth white fir and Shasta red fir. Some seedlings of the more desirable species will be inter-planted with reserve trees in the patch cuts. The designed patch cuts will not resemble large continuous plantations and should not have significant effects on fuels and fire behavior.

One existing pine plantation will be thinned under the Replacement Gal Timber Sale. The plantation is approximately 50 years old, 51 acres in size and will be thinned to variable densities ranging from 80 to 160 square feet of basal area.

Issue: Slash Burning – consider using Kraft paper rather than polyethylene for slash piles.
Response: The Resource Area has experimented with the use of Kraft paper for covering slash piles. Under the desired burning conditions, when the surrounding fuels are moist, the paper covered slash pile was typically moist as well. This typically results in poor consumption and excessive production of particulate matter (PM2.5) and particles of incomplete combustion (PIC). The emissions to the atmosphere contributed by the sheet of polyethylene covering are chemically similar to the emissions
from the underlying pile of slash. There is no evidence that unique classes of chemicals are found in emissions from burning polyethylene, in comparison to burning wood debris. The literature, and anecdotal evidence, clearly indicates that slash piles burn more efficiently and produce fewer PICs & PM2.5 when they are allowed to cure to a dryness that readily supports combustion. The benefit obtained from the increased combustion efficiency commensurate with dry biomass fuel favors the use of some sort of moisture barrier to aid in the drying of logging slash piles. The articles reviewed provide no evidence that burning the PE plastic sheeting along with the slash pile would cause a significant impact to air quality, however, the limited amount of information regarding the pyrolysis/combustion of PE in conjunction with woody biomass precludes an ironclad statement (from REVIEW OF POTENTIAL AIR EMISSIONS FROM BURNING POLYETHYLENE PLASTIC SHEETING WITH PILED FOREST DEBRIS FINAL REPORT, October 28, 2003; Christopher Wrobel, Tim Reinhardt, URS Corporation; Prepared for USDA Forest Service). The burning of plastic is also in conformance with the MEMORANDUM OF UNDERSTANDING Between the OREGON DEPARTMENT OF FORESTRY and the OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (March 28, 2005).

**Issue:** Concerns that prescribed underburning and pile burning will impact the Klamath Basin air-shed.

**Response:** Underburning and pile burning will only be conducted when airshed conditions allow for dispersal of smoke away from the Klamath Basin.

**Issue:** Regarding post-treatment underburning in true fir stands; true fir does not hold up well to fire. Underburning true fir causes mortality, reduced vigor and degrades the economic value of the residual stand.

**Response:** The BLM generally agrees with this comment. Underburning will only be conducted in areas where impacts to younger true fir stands will be mitigated or avoided. Some of the impacts that will be avoided include excessive mortality and excessive damage to economic values of the residual stand. However, some mortality and damage to remaining live trees is expected and will contribute to wildlife habitat for species requiring snags and defective trees.

**Yarding/Logging**

**Issue:** Tractor yarding should be minimized as it will result in soil disturbance and impacts that will contribute to soil erosion, compaction and rutting.

**Response:** Impacts expected from ground based yarding operations are described in the EA on pages 40 - 50. Implementation of the BMPs and PDFs in Appendix B of the EA pertaining to soils and logging will limit or avoid impacts associated with tractor yarding.

Other forms of yarding, such as cable or helicopter were not analyzed for the following reasons: The ground is general flat and suitable for ground based equipment, most of the area has been previously logged with ground based equipment and has existing skid trails and landings, the costs of helicopter logging were not feasible and the flat terrain did not support normal cable logging systems. In addition, the current permanent road system in the analysis area is designed to implement ground based yarding.

**Issue:** The BLM is encouraged to drop the unit within the owl core in SW Sec. 20, T38S R.6E (Unit 20-2) as the unit would be an economic drag on the timber sale with little benefit to stand health, fuel loading or wildlife habitat.

**Response:** In response to public comment and further analysis, Unit 20-2 has been dropped from the Replacement Gal Timber Sale.

**Soils**

**Issue:** All of the soils in the project area have characteristics that favor the formation of a compacted layer and exhibit a severe rutting hazard (EA pages 43-44).
Response: The BMPS and PDFs included in Appendix B of the EA will be incorporated into project implementation. These measures will limit or avoid compaction and rutting. Common measures taken to reduce impacts to soils include not allowing hauling when roads are wet, not allowing equipment operations when soils conditions exceed 20% moisture content and/or implementing logging during winter months when sufficient snow is present to protect soils.

Wildlife
Issue: The BLM should not downgrade 570 acres of spotted owl nesting roosting and foraging habitat as proposed under this decision.
Response: Based on the KSW agreement and subsequent modifications to the sale, no suitable habitat (NRF) will be downgraded under the planned actions.

Issue: Critical Habitat Unit OR-37 plays a pivotal role in east-west connectivity of owl nesting habitat in the southern Cascades Mountains. OR-37 provides the single most important “stepping stone” of critical habitat linking the western/eastern Cascades and the Klamath Mountains provinces.
Response: The BLM agrees that the project area (as part of former designated critical habitat) does play a pivotal role in connectivity between both east and west cascades and the Klamath province. The treatment within the Replacement Gal timber sale area will continue to maintain both NRF and dispersal habitat and continue to provide the connectivity between the western/eastern provinces and large LSR’s as designed under the northwest forest plan.

Issue: Spotted owls will continue to be negatively affected and displaced by barred owls in the project areas. All potential NSO habitat should be reserved to provide more areas for the spotted owls to seek refuge.
Response: The BLM agrees that the barred owl continues to negatively affect and displace the spotted owl. The planned action as described above will maintain NRF habitat within the project area.

Issue: The EA indicates that four NSO territories will be harmed by the proposed logging.
Response: Originally the Replacement Gal Timber Sale would have adversely affected two pair of spotted owls. The KSW Negotiated Agreement and modified prescription will maintain spotted owl NRF habitat where it occurs. Therefore the habitat within the territories described in the EA will be maintained.

Issue: The “no effect” call for NSO critical habitat contained in the EA is misleading. This habitat is no less critical than it was three years ago.
Response: The “No Effect” determination is appropriate based on the current (2008) boundaries of northern spotted owl designated critical habitat. The Replacement Gal timber sale is outside of the 2008 designated critical habitat boundary therefore there would be no impact to designated critical habitat.

Issue: The contention on page 27 of the EA that there will be no impacts to NSO designated critical habitat for the proposed project is simply false. Much of the proposed logging is within the 1992 designated CHU OR-37.
Response: See above response.

Issue: Releasing the EA prior to conducting surveys for white-headed woodpeckers means that the impacts to this sensitive species have not been disclosed to the public.
Response: The impacts to white-headed woodpeckers were considered within the EA on page 29 and 35. White-headed woodpecker (WHWO) surveys were completed in the Spencer Creek watershed in June 2010. Most of the Replacement Gal timber sale is not considered WHWO high quality habitat due to the lack of large ponderosa pine within the sale area. The surveys within the timber sale area detected no white-headed woodpeckers.
**Issue:** We strongly recommend consideration of an alternative that does not degrade or remove suitable or critical NSO habitat.

**Response:** Although the BO for the Replacement Gal and Spike Timber Sales included downgrading suitable NSO habitat, the BLM agreed in the KSW Negotiated Agreement to maintain all NRF habitat. The BLM has met that agreement. The USFW and BLM biologists have reviewed the modified sale units and other management actions and agree that no NRF will be downgraded.

**Issue:** The EA claims that sufficient snags and coarse woody debris will be retained in harvest units. However current RMP standards for snags are outdated. The EA does not disclose what optimal levels of snags are.

**Response:** No snags are designated for harvest in the Replacement Gal Timber Sale or any of the vegetation management projects. Any snags removed from the analysis area would be those designated as hazard trees or trees that were marked for harvest when they were alive and have subsequently died.

The EA is tiered to the 1995 RMP and the proposed project uses the RMP standards for snag retention. On page 69 of the EA, it states that 2.4 snags per acre will be retained and 120 linear ft of CWD. On page 17 of the EA, under “Vegetation - Affected Environment” it describes the current levels which exceed the RMP standards for both snags and CWD.

**Issue:** Thinning and density management captures mortality and increases vigor thereby delaying recruitment of snags.

**Response:** The general variable density management prescription that is implemented on approximately 329 acres of the Replacement Gal Timber Sale includes removal of 25 to 35 percent of the stand stocking (basal area) through primarily small to mid diameter thinning. While the thinning is designed to improve vigor and resiliency of the remaining 65 to 75 percent of the stand, it will not prevent all mortality. Past timber sales in the analysis area with similar prescriptions have maintained adequate snag levels and green trees for future snag recruitment (see 2007 Annual Program Summary and Monitoring Report pages 75 to 119 and 2009 APS pages 75 to 120).

**Hydrology and Aquatic Conservation Strategy**

**Issue:** Allowing use of heavy equipment in the outer half of designated riparian reserves will inhibit attainment of the objectives of the Aquatic Conservation Strategy.

**Response:** The effects of riparian reserve treatments including the use of heavy equipment in the outer half of Riparian Reserves was analyzed on pages 50-52 of the EA. The analysis concluded that the application of appropriate Best Management Practices (BMPs) and Project Design Features (PDFs) listed on page 70-71 of the EA would minimize adverse impacts and therefore will not inhibit attainment of ACS strategy objectives.

**Issue:** The EA indicates that the high number of road/stream crossings of Spencer Creek are contributing to a downward trend of aquatic habitat. Yet both action alternatives call for significant increase in log truck traffic on natural surface roads and no reduction of road/stream crossings in the planning area.

**Response:** See Roads and OR/ATV use section above.

The reference to a downward trend in Spencer Creek on page 39 of the EA came from the 1995 Spencer Creek Pilot Watershed Analysis. Considering the amount of stream crossing reductions, riparian thinnings, road closures, road surfacings, culvert removals and replacements and instream improvements in the Spencer Creek Watershed over the last 15 years (see restoration summary “Watershed Restoration Treatments Implemented and Planned in the Spencer Creek Watershed” available at the KFRA Office), we believe that watershed conditions as related to stream crossings and roads as a source of fine sediment are improving and are on an upward trend in the watershed. Additionally, there are several measures included in this decision for additional improvements that will contribute further to this upward trend.
**Cultural Resources**

**Issue:** Need adequate surveys for archaeological sites and culturally significant plants in areas of treatment or proposed for designation as a recreational site. Ensure avoidance of cultural sites.

**Response:** The EA stated that surveys will be completed and any known sites avoided (EA-08-09 Spencer Creek Treatments Page 73). Since that time, all proposed harvest/treatment areas have been surveyed and no cultural sites were identified.

No recreational site development is proposed in the Spencer Creek Treatments EA.

**Issue:** Interpretive sign placement may promote or cause damage to cultural sites.

**Response:** In the Spencer Creek Treatments EA no interpretive sign placement was proposed in any alternative. No interpretive sign placement is included in the Replacement Gal Timber Sale.

**Issue:** Any recreational areas proposed may need to be surveyed for culturally sensitive plants.

**Response:** No new recreational areas are proposed under the Spencer Creek Treatments EA or the Replacement Gal Timber Sale.

**Climate Change/Carbon Storage**

**Issue:** The EA does not analyze climate and carbon storage impacts of the proposed action.

**Response:** The EA discusses climate change, carbon storage and air quality and the effects of the alternatives on pages 56 – 60.

**Issue:** The NEPA analysis must consider both the carbon and climate consequences of this proposal both cumulative and at the project level.

**Response:** The EA discusses climate change, carbon storage and air quality and the effects of the alternatives on pages 56 – 60.