



United States Department of the Interior

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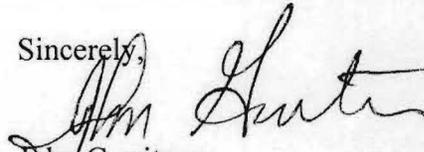
IN REPLY REFER TO:
1792(ORM060)

AUG 23 2011

Dear Interested Public:

This letter transmits to you a copy of my decision, including my rationale for the decision, and a Finding of No Significant Impact for the Cottonwood Forest Management Project. I have read, and appreciate your efforts in submitting comments on the Cottonwood Forest Management Project Environmental Assessment (EA). In response to public comments, minor revisions were made to the EA for the purposes of clarification. The revised EA will be posted to the Medford District BLM website (<http://www.blm.gov/or/districts/medford/plans/index.php>). Substantive comments have been specifically addressed in the enclosed Appendix A, Public Involvement Comment Analysis of the EA for the Cottonwood Forest Management Project. If you have any questions regarding my decision for this project, please contact me at (541) 618-2438.

Sincerely,



John Gerritsma
Field Manager
Ashland Resource Area

Enclosures



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE
ASHLAND RESOURCE AREA
3040 Biddle Road
Medford, Oregon 97504



DECISION RECORD
For the
COTTONWOOD FOREST MANAGEMENT PROJECT
(DOI-BLM-OR-M060-2011-0003-EA)

INTRODUCTION

This document describes my decision, and reasons for my decision, regarding the selection of a course of action to be implemented for the Cottonwood Forest Management Project. The Environmental Assessment (EA) for the Cottonwood Forest Management Project documented the environmental analysis conducted to estimate the site-specific effects on the human environment that may result from the implementation of the Cottonwood proposal. The Cottonwood EA was issued for public review on July 1, 2011. Notification of the availability of the EA was published in Medford's Mail Tribune newspaper on July 6, 2011; the EA was posted on BLM's Medford District Website on July 5, 2011. The EA public review period ended on August 4, 2011.

BACKGROUND

The Cottonwood Forest Management Project EA documented the analysis of BLMs proposal to harvest trees on 1,108 acres of conifer forest stands on BLM-administered lands. The Cottonwood Forest Management Project is located primarily within the Keene Creek drainage of the Jenny Creek Watershed; an estimated 12 acres within two units would cross over the drainage boundary into the Dead Indian Creek drainage of the South Fork Little Butte Creek Watershed. The Public Land Survey System description for the Cottonwood Project Area¹ is: T. 38 S., R. 3 E., in sections 19, 20, 29, 32, 33, 34; T. 39 S., R. 3 E., in sections 3, 4, 5, 8, 9, 10, 17, 19, 20, 21, 27, 28, 29, 30, 31, 32, 34; T. 40 S., R. 3 E., in section 3; Willamette Meridian, Jackson County, Oregon.

¹ The Cottonwood Project Area includes areas where action is proposed, including units where forest thinning is proposed, roads used and maintained for hauling (up to County roads), road construction, or road improvements.

THE DECISION

As the Responsible Official, it is my decision to implement a subset of Alternative 2 as described below. My decision authorizes the following actions:

- The implementation of timber harvest on approximately 725 acres of conifer forest stands (Table 1 and Maps 1-4) using a variety of silvicultural prescription and harvest methods as described in the Revised EA (p. 2-10 to 2-14).
- Commercial thinning will be accomplished using utilizing tractor (about 668 acres) and cable (about 57 acres) yarding systems.
- Follow-up fuels reduction treatments will occur as described in the Revised EA (p. 2-14) to mitigate hazardous fuels generated from timber harvest (activity fuels).
- The implementation of Alternative 2 will include pre-commercial thinning on approximately 16 acres of the commercial harvest units.
- About 1.15 miles² of new permanent road will be constructed, to provide access to Unit 20-2; this road will be closed immediately following the completion of harvest activities (construction and closure will occur the same season of use).
- Six temporary spurs roads (up to 0.6 miles) will be constructed to access Units 17-3, 17-4, and 17-5; temporary spurs will be constructed and decommissioned the same season of use (Revised EA p. 2-3).
- About 1.9 miles of existing roads will be decommissioned. Road decommissioning involves removing culverts, constructing water bars and barricades, and seeding and/or planting, mulching disturbed areas, and camouflaging road entrances with slash, boulders, and coarse woody material, etc. as needed to prevent vehicle entry (Revised EA p. 2-4).
- An estimated 36 miles of existing roads, as described in the Revised EA (p. 2-4 to 2-5) will be used as haul routes and improved as needed to meet BLM standards.
- All applicable Project Design Features (PDFs) will be incorporated as required conditions of this project. A complete listing of the PDFs can be found in Chapter 2 of the EA (p. 2-14 to 2-33).

² This represents actual miles as surveyed on the ground, mileage was reported as about 1.3 miles in the EA.

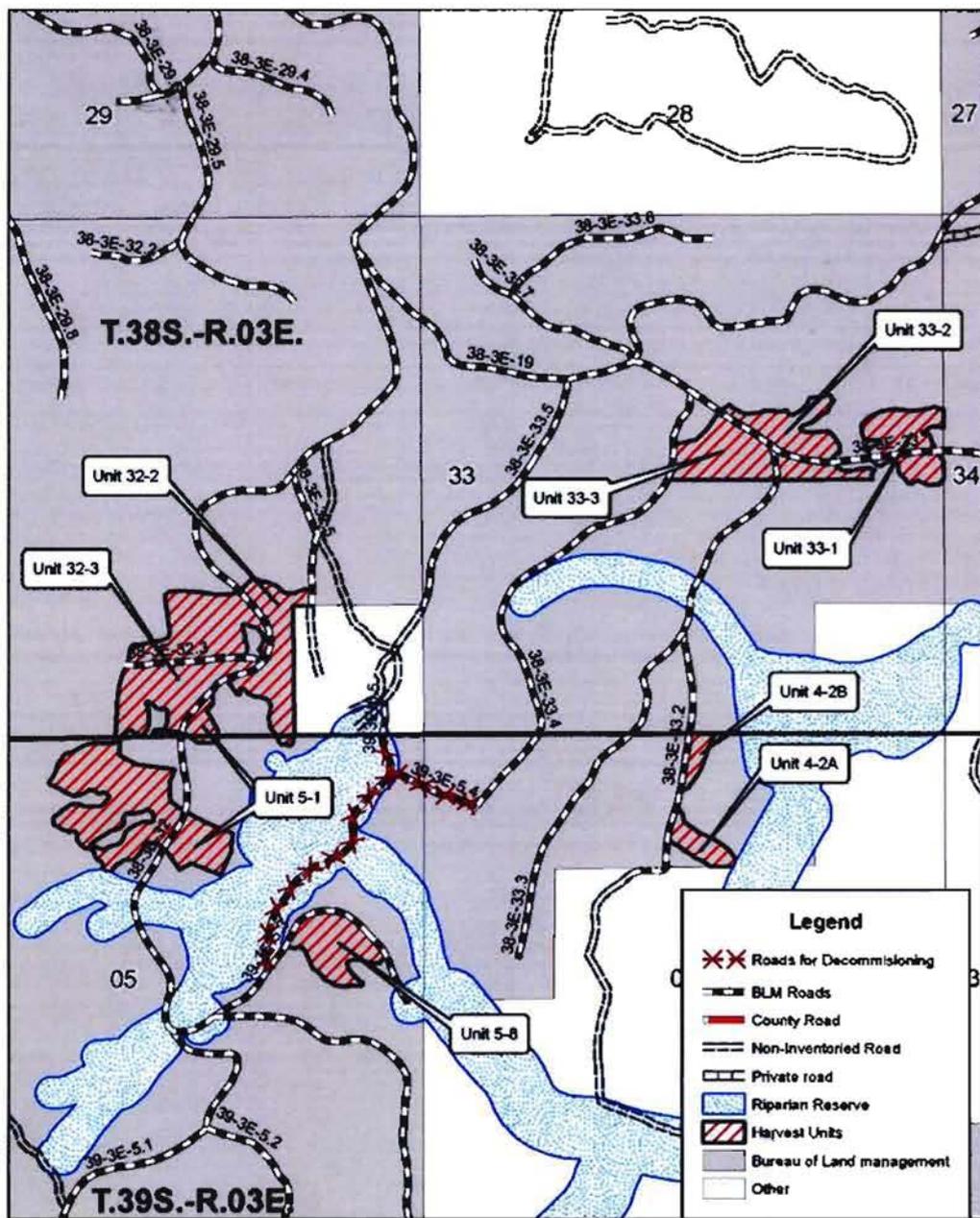
Table 1. Cottonwood Forest Management Project, Units by Prescription and Harvest Method

Unit No.	Est. Acres	Silvicultural Prescription		Harvest Method	Associated Treatments (PCT, Fuels)
		Forest Type	NSO Habitat Type		
4-2A,B	6	Mixed Conifer Site	Dispersal	Tractor	Activity fuel
5-1	8	White Fir Site	Dispersal	Tractor	Activity fuel
5-8	10	White Fir Site	NRF	Tractor	Activity fuel
9-1	30	White Fir Site	Dispersal	Tractor	Activity fuel
9-2	29	Mixed Conifer Site	Dispersal	Tractor	Activity fuel
17-2	38	White Fir Site	Dispersal	Tractor	Activity fuel
17-3	57	Mixed Conifer Site	Dispersal	Cable	Activity fuel
17-4	12	Mixed Conifer Site	NRF	Tractor	Activity fuel
17-5	19	Mixed Conifer Site	Dispersal	Tractor	Activity fuel
17-6	63	Mixed Conifer Site	NRF	Tractor	Activity fuel
20-1	33	Mixed Conifer Site	Dispersal	Tractor	Activity fuel
20-2	53	Mixed Conifer Site	NRF	Tractor	Activity fuel
21-1	32	White Fir Site	NRF	Tractor	Activity fuel
21-2A,B	55	Mixed Conifer	Dispersal	Tractor	Activity fuel
21-3	24	Mixed Conifer	Dispersal	Tractor	Activity fuel
21-4	57	Mixed Conifer	NRF	Tractor	Activity fuel
21-4C	3	Mixed Conifer	NRF	Tractor	Activity fuel
30-1	37	Mixed Conifer	NRF	Tractor	Activity fuel
30-2	21	Mixed Conifer Site	NRF	Tractor	Activity fuel
30-3	6	Mixed Conifer Site	NRF	Tractor	Activity fuel
32-2	14	White Fir Site	Dispersal	Tractor	Activity fuel
32-3	54	White Fir Site	Dispersal	Tractor	Activity fuel
32-4B	12	Mixed Conifer Site	Dispersal	Tractor	Activity fuel
32-5A,B	16	Mixed Conifer Site	Dispersal	Tractor	PCT/Activity fuel
33-1	11	White Fir Site	Dispersal	Tractor	Activity fuel
33-2	13	White Fir Site	Dispersal	Tractor	Activity fuel
33-3	12	White Fir Site	Dispersal	Tractor	Activity fuel
Total	725				

1. Abbreviations:

NSO = Northern Spotted Owl NRF = Nesting, Roosting, Foraging

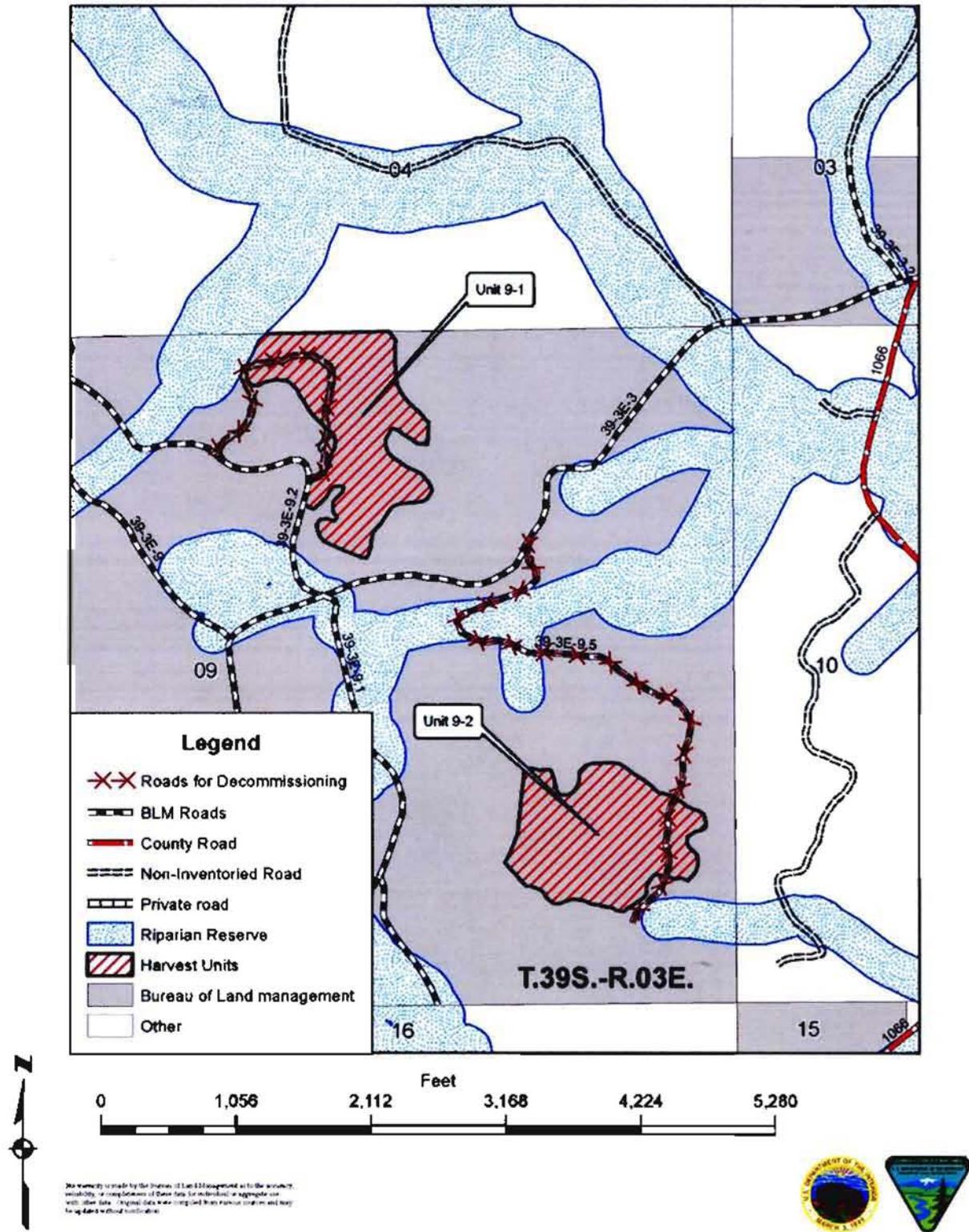
Map1. Cottonwood Forest Management Project



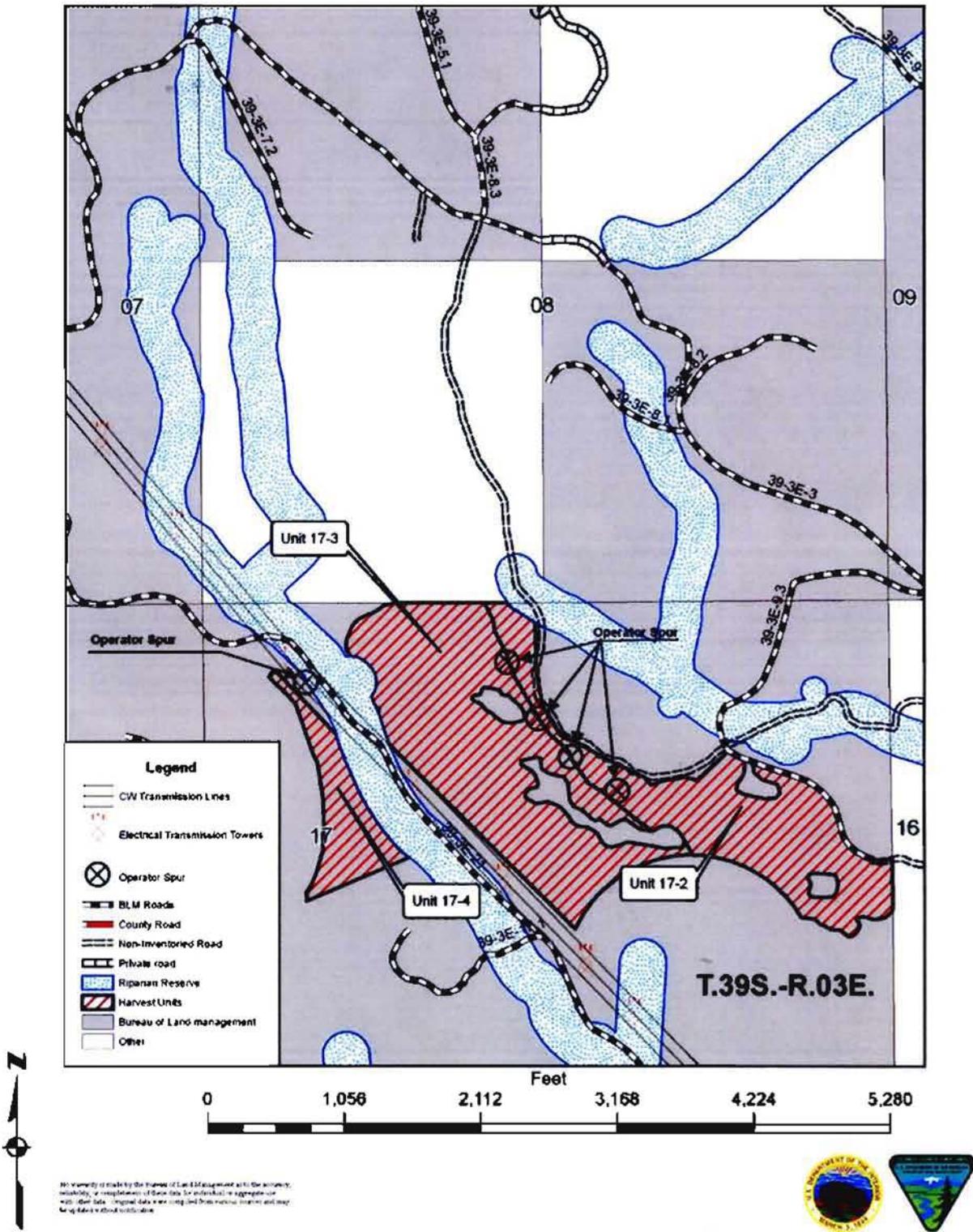
This map was made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.



Map2. Cottonwood Forest Management Project

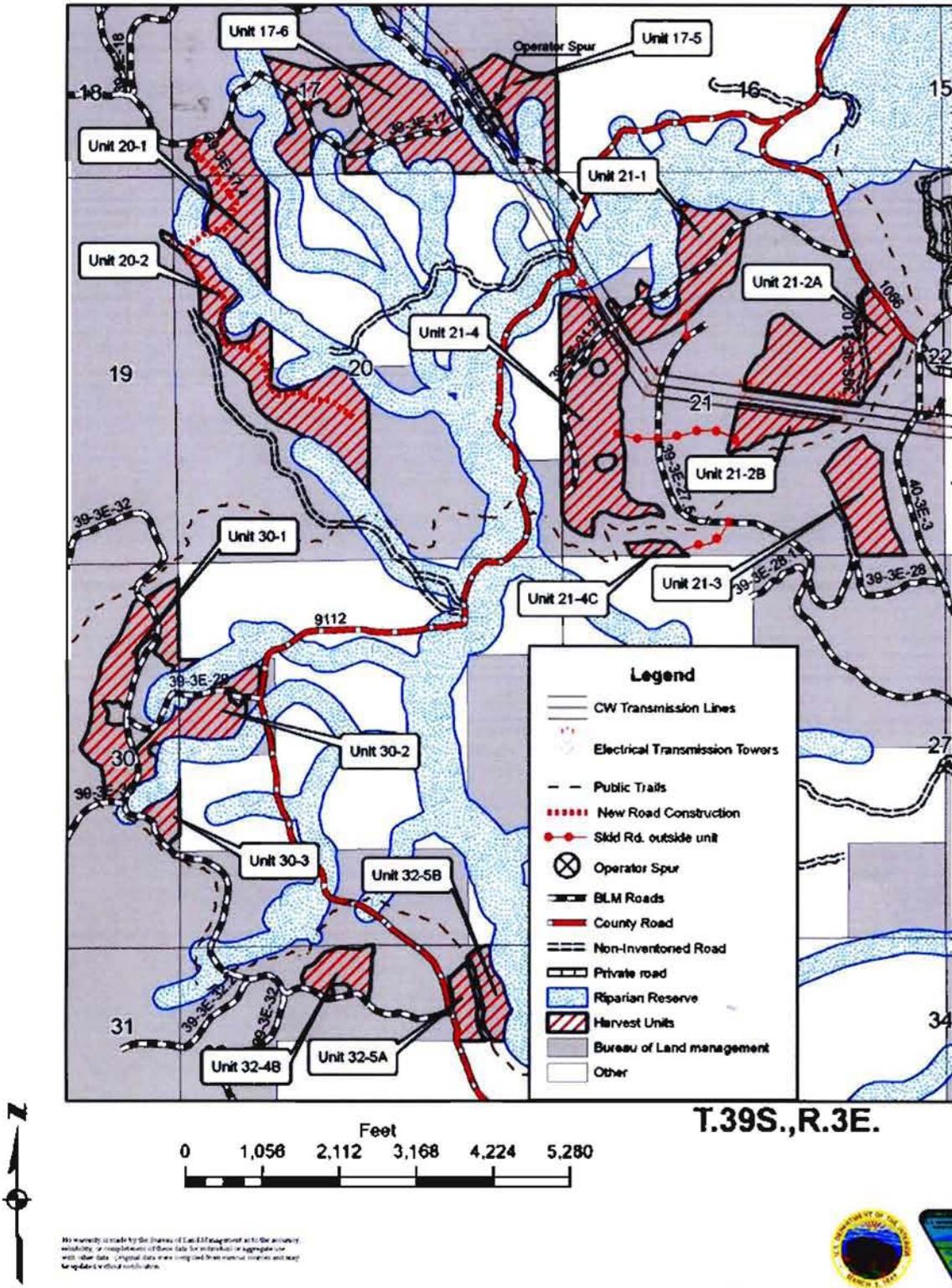


Map3. Cottonwood Forest Management Project



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with this data. Original data were compiled from various sources and may be updated without notice.

Map 4. Cottonwood Forest Management Project



DECISION RATIONALE

My decision to implement a subset of Alternative 2 is based on consideration of the relative merits and consequences of either implementing or not implementing the Cottonwood Forest Management Project, as documented in the Revised EA and Finding of No Significant Impact, as well as consideration of all public comments and concerns received. I have determined that my decision outlined above best meets the purpose and need for this project, as identified in Chapter 1 of the Cottonwood Forest Management EA, in summary:

Alternative 2 will implement silvicultural prescriptions that are designed to improve tree vigor and growth for long-term forest production and reduce the effects of forest disease on forest stands (Revised EA p. 2-10 to 2-12). The long term (>10 years) effects of forest thinning are anticipated to increase the health and vigor of the residual stands (Revised EA, Chapter 3, Section G, Silviculture). As designed, silvicultural treatments (forest thinning) will improve tree vigor and growth, maintain and create diversified stand structure, and decrease competition for more fire resilient pine, cedar, and oak species (Revised EA p. 3-67).

The Cottonwood Forest Management Project will maintain existing northern spotted owl nesting, roosting, foraging (NRF), and dispersal only habitat within units harvested. Furthermore, forest thinning will occur on only 17 percent of the existing northern spotted owl nesting, roosting, and foraging (NRF) habitat within the analysis area, leaving 83 percent of NRF untreated. (Revised EA p. 3-47 and 3-50).

While managing forest stands to maintain existing northern spotted owl habitat will sustain higher stocking levels and reduce the benefits of thinning on tree vigor and growth, this decision balances the need to maintain owl habitat while addressing the need to reduce forest densities and provide job opportunities for people in southwest Oregon.

I have personally read the comment letters sent in response to the EA public review period, and I have considered them fully. Many comments reflected a desire to expand the Purpose and Need (and the range of alternatives) to reflect desires other than the harvest of timber. As stated in the EA (Revised EA p. 1-3), our project was designed to provide for forest products while meeting the needs for the northern spotted owl and maintaining the existing transportation system. Our response to the issue of potential expansion of the Cascade Siskiyou National Monument and the South Cascades Wilderness Proposal was expressed in the EA (Revised EA p. 1-9 to 1-10 and 2-37). Comments were also received regarding the adequacy of BLM's environmental analysis documented in the Cottonwood Forest Management Project EA. The BLM has identified substantive comments/issues submitted during the EA public review period and prepared a response to these comments. Responses are intended to be explanatory in nature and where applicable to guide the reader towards analysis or information contained in the Environmental Assessment (EA). BLM's response to substantive comments is documented in Appendix A, Public Involvement Comment Analysis of the EA for the Cottonwood Forest Management Project. In response to public comments, minor revisions and corrections were also made to the EA for the purposes of clarification. The Revised Cottonwood Forest Management Project EA will be posted to BLM's Medford District Website.

In conclusion, the Cottonwood Project will complete much needed forest thinning to provide for long-term sustainable timber production while maintaining existing habitat for the northern spotted owl. The required implementation of Project Design Features will provide for the protection of resources

consistent with existing laws, policy, and the direction of the 2008 Medford District Resource Management Plan (RMP) and the 1995 RMP (see Plan Consistency below and the Finding of No Significant Impact document for the Cottonwood Project).

MONITORING

Implementation monitoring is accomplished through BLM's contract administration process. Project design features included in the project description are carried forward into contracts as required contract specifications. BLM contract administrators and inspectors monitor the daily operations of contractors to ensure that contract specifications are implemented as designed. If work is not being implemented according to contract specifications, contractors are ordered to correct any deficiencies. Timber sale contract work could be shut down if infractions of the contract are severe. The contract violations would need to be corrected before the contractor would be able to continue work. If contract violations are blatant, restitution could be required.

CONSULTATION AND COORDINATION

Pursuant to the Endangered Species Act (ESA), formal consultation was completed with the US Fish and Wildlife Service. The Service concluded in its Letter of Concurrence (#13420-2010-1-0178) that the District's proposed action is not anticipated to result in any incidental take and is not likely to adversely affect spotted owls, or spotted owl critical habitat within the action area (Letter of Concurrence #13420-2010-1-0178, p. 14-15).

Scoping notices were sent on October 29, 2010 to Federally Recognized Tribes, the Klamath Tribe, the Confederated Tribes of the Siletz, the Confederated Tribes of the Grand Ronde, the Cow Creek Band of the Umpqua Indians, Shasta Indian Nation, and the Quartz Valley Indian Reservation. Jackson County Commissioners, Oregon Department of Fish and Wildlife, and Oregon Department of Forestry and many other agencies were also notified of this project during the scoping period.

PUBLIC INVOLVEMENT

A letter briefly describing the Proposed Action and inviting comments was mailed to adjacent landowners, interested individuals, organizations, and other agencies on October 29, 2010. The BLM led a field trip to the project area on November 6, 2010. The purpose of the field trip was to view and discuss the project proposal in the field with interested individuals and organizations. Comments were originally requested to be received by December 1, 2010; the scoping period was extended to December 30, 2010 in response to a request from the public for additional time to prepare their comments. Comment letters received were reviewed by the interdisciplinary team of specialists and by the Responsible Official, the Ashland Resource Area Field Manager. Issues identified to be relevant to the analysis of the proposed action were incorporated into the list of relevant issues in Section G, 1, Relevant Issues.

The Cottonwood EA was completed on July 1, 2011 and made available for public review. Notification of the availability of the EA was published in Medford's *Mail Tribune* newspaper on July 6, 2011; the EA was posted on BLM's Medford District Website on July 5, 2011. The EA public review period ended on August 4, 2011. Written comments received in response to the Cottonwood EA were reviewed by the interdisciplinary team and responsible official and substantive comments were addressed in Appendix A, Public Involvement Comment Analysis and Response to Comments Received for the

Cottonwood Forest Management Project Environmental Assessment. In addition, minor revisions were made to the EA for the purposes of clarification. The revised EA will be posted to the Medford District BLM website (<http://www.blm.gov/or/districts/medford/plans/index.php>).

PLAN CONFORMANCE

The proposed action for the Cottonwood Forest Management Project was initiated under the *1995 Medford District Record of Decision and Resource Management Plan (RMP)*, which incorporated the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (Northwest Forest Plan)* (USDA and USDI 1994). The 1995 Medford District Resource Management Plan was later amended by the *2001 Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*, as modified by the 2011 Settlement Agreement.

On December 17, 2009, the U.S. District Court for the Western District of Washington issued an order in *Conservation Northwest, et al. v. Sherman, et al.*, No. 08-1067-JCC (W.D. Wash.), granting Plaintiffs' motion for partial summary judgment and finding NEPA violations in the *Final Supplemental to the 2004 Supplemental Environmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines* (USDA and USDI, June 2007). In response parties entered into settlement negotiations in April 2010 and the Court filed approval of the resulting Settlement Agreement on July 6, 2011. Projects that are within the range of the northern spotted owl are subject to the survey and management standards and guidelines in the 2001 ROD, as modified by the 2011 Settlement Agreement.

The Cottonwood Project is consistent with the Medford District Resource Management Plan as amended by the 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (2001 ROD), as modified by the 2011 Settlement Agreement. The Cottonwood Project applies the Survey and Manage species list in the 2001 ROD (Table 1-1, Standards and Guidelines, pages 41-51) and thus meets the provisions of the 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*, as modified by the 2011 Settlement Agreement.

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 Medford District's 2008 ROD and RMP, we evaluated this project for consistency with the 2008 ROD and RMP. Based upon this review, I have determined that this Decision is consistent with both the Medford District's 1995 ROD/RMP and the 2008 ROD/RMP. Although the selected alternative contains some design features not mentioned specifically in the 2008 ROD and RMP, these design features are consistent with the ROD and RMP. For example, the Cottonwood project contains Project Design Features that apply Best Management Practices of the 1995 RMP (Appendix D); the application of these Best Management Practices is consistent with Best Management Practices contained in the 2008 RMP (Appendix C). Additionally, since this project was initiated under the 1995 RMP, the project was designed and analyzed for conformance with 1995 RMP guidance for Riparian Reserves and the Aquatic Conservation Strategy Objectives.

This decision is also in conformance with the direction given for the management of public lands in the Medford District by the Oregon and California Lands Act of 1937 (O&C Act), Federal Land Policy and Management Act of 1976 (FLPMA), the Endangered Species Act (ESA) of 1973, the Clean Water Act of 1987, Safe Drinking Water Act of 1974 (as amended 1986 and 1996), Clean Air Act, and the Archaeological Resources Protection Act of 1979.

AUTHORIZATION

It is my decision to implement the Cottonwood Forest Management Project, as described in the section titled Decision, above.



John Gerritsma
Field Manager, Ashland Resource Area
Medford District, Bureau of Land Management

8/23/11
Date

ADMINISTRATIVE REMEDIES

This decision is a Forest Management Decision. Administrative remedies are available to persons who believe that they will be adversely affected by this decision. When timber is offered for sale, a Notice of Sale will be published in Medford's *Mail Tribune* newspaper. Publication of the first Notice of Sale establishes the effective date of the decision and the date initiating the protest period provided for in accordance with 43 CFR 5003.3. Any protests of the timber sale must be filed with the Authorized Officer (the Responsible Official signing this Decision) within 15 days of the publication of the Notice of Sale in Medford's *Mail Tribune* newspaper. The regulations do not authorize the acceptance of protests in any form other than a signed, written hard copy that is delivered to the physical address of the advertising BLM office. No e-mail or fax protests will be accepted. A statement of reasons for protesting the decision must also accompany the protest. It is anticipated that the Notice of Sale will be published in Medford's *Mail Tribune* newspaper in late August of 2011. The BLM does not warrant publication on an exact date. All parties considering protest of this decision are encouraged to review the aforementioned newspaper to ensure accurate knowledge of the exact publication date of the Notice of Sale.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

MEDFORD DISTRICT OFFICE



FINDING OF NO SIGNIFICANT IMPACT (FONSI)

For the

COTTONWOOD FOREST MANAGEMENT PROJECT

(DOI-BLM-OR-M060-2011-0003-EA)

INTRODUCTION

The Environmental Assessment (EA) for the Cottonwood Forest Management Project (DOI-BLM-OR-M060-2011-0003-EA) documented the environmental analysis conducted to estimate the site-specific effects on the human environment that may result from the implementation of the Cottonwood proposal. In response to public comments received during the EA review period, minor revisions were made to the EA for the purposes of clarification. The revised EA will be posted to the Medford District BLM website (<http://www.blm.gov/or/districts/medford/plans/index.php>).

The Cottonwood Forest Management Project would harvest trees in conifer forest stands on BLM-administered land primarily within the Keene Creek subwatershed of the Jenny Creek Watershed; an estimated 12 acres cross over the watershed boundary and fall within the Dead Indian Creek drainage of the South Fork Little Butte Creek Watershed. The Public Land Survey System description for the Cottonwood Project Area¹ is: T. 38 S., R. 3 E., in sections 19, 20, 29, 32, 33, 34; T. 39 S., R. 3 E., in sections 3, 4, 5, 8, 9, 10, 17, 19, 20, 21, 27, 28, 29, 30, 31, 32, 34; T. 40 S., R. 3 E., in section 3; Willamette Meridian, Jackson County, Oregon.

Based on the context and intensity of the impacts analyzed in the Revised EA (Chapter 3), I have determined that my decision to implement the proposal, as described in Decision Record for the Cottonwood Forest Project, is not a major Federal action that would significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. I considered the following criteria, suggested by CEQ (40 CFR 1508.27), for evaluating intensity or severity of the impact of the Cottonwood Project.

¹ The Cottonwood Project Area includes areas where action is proposed, including units where forest thinning is proposed, roads used and maintained for hauling (up to County roads), road construction, or road improvements.

The Cottonwood Forest Management Project will:

1. *Not result in significant beneficial or adverse effects.*

- Soil productivity would be protected by requiring designated skid trails and using existing skid trails to the extent practical, limiting compaction from current harvest activities to 12 percent of the harvested area (Revised EA p. 3-12). Mechanized harvesting would only be allowed when soil moistures are 15 percent by weight at 3 inch depth, or over snow with a minimum snow depth of 18 inches. This is consistent with 2008 Medford District RMP guidance (RMP Appendix C, p. 23). This is also consistent with the 1995 RMP under which the proposal was developed (PRMP/EIS p. 4-13; EA, p. 3-11).
- Soil erosion from tractor and cable yarding, permanent road construction, temporary road construction, road decommissioning, and road maintenance will be minimized through the application of Best Management Practices to be implemented through required project design features (Revised EA p. 2-14 to 2-33).
- Water quality and aquatic habitat would be maintained:
 - Since no timber harvest would occur within Riparian Reserves, stream temperatures would not be affected (Revised EA p. 3-20).
 - If BMPs are implemented properly, any sediment transported from road maintenance and haul activities are expected to be an immeasurable fraction of the total sediment load and would not be detectable at downstream locations (Revised EA p. 3-20).
 - There would be no net increase in road densities (Revised EA p. 2-3 to 2-5, 3-20), road densities would decrease substantially (16%) in Riparian Reserves (Revised EA p. 3-22), thus reducing road related sedimentation over the long-term as decommissioned roads become stabilized and vegetation reestablishes in the road bed. Recovery of shade producing vegetation in riparian areas could decrease stream temperatures over time.
 - All new roads permanent or temporary would be constructed using techniques that disperse water (out-sloping); therefore, while there would be short-term increase in sediment from new road construction in proximity to channel crossings, there would be no connectivity with the stream channels once construction is completed (Revised EA p. 3-20).
 - Sedimentation from the construction of new road #39-3E-17.04 would be minimized due to only allowing construction to occur during the dry season when the intermittent channel is dry and stabilizing and seeding the disturbed soils prior to fall rains. Any sediment remaining in the channel once seasonal flow returned (estimated to be less than one (1) cubic foot, Revised EA p. 3-32) could be mobilized and eventually be transported to Little Hyatt Reservoir where it would be assimilated into the existing mud substrate bottom. The small amount of sediment (< one (1) cubic foot) would not have significant impacts on aquatic habitat in the intermittent stream channel or Little Hyatt Reservoir (Revised EA p. 3-32). The remaining road construction lacks hydrologic connectivity with the stream network (Revised EA p. 3-31), and would not have causal mechanism to input sediment to streams and aquatic habitats.
- All thinning treatments would maintain overstory canopy cover of 40 to 60 percent; thus, there would not be any increase in acreage below 30 percent canopy cover (an indicator used to assess the risk of increasing frequency and magnitude of peak flow) (Revised EA p. 3-20). The removal of small diameter vegetation (<8 inches diameter) for precommercial thinning/fuels

reduction would not appreciably reduce canopy cover. Therefore, there would be no risk for increasing the frequency and magnitude of peak flow as a result of implementing the Cottonwood Forest Management Project.

- Fuel levels would increase immediately following forest management activities, however this increase in fuel loading would not create a significant increase in the risk of large-scale wildfires for the short-term (Revised EA p. 3-82). This is because:
 - slash piling is required soon after yarding is completed on a unit by unit basis, which breaks up the continuity of the fuel bed and its ability to carry fire;
 - slash is green when first cut and gradually becomes more susceptible to burning;
 - green fuels can dampen fire behavior and handpiles usually need to cure for 4-6 months before they will burn;
 - The BLM would administer contracts to complete post-harvest fuels treatments within 6 months to 2 years following completion of harvest activities (Revised EA p. 2-14). Following treatment of activity fuels, fire hazard would be lower than pre-harvest conditions due to the reduction in ladder and canopy fuels (Revised EA p. 3-82).
- Surveys were completed for great grey owls. Five reproductive sites located in the vicinity of the project area would be protected, each with a 1/4 buffer or equivalent area polygon (Revised EA, p. 3-52).
- Special Status and/or Survey and Manage mollusk species would be protected by no treatment buffers (Revised EA, p. 2-21, 3-54 to 3-55).
- While no active golden eagle nest sites have been detected since the 1990s (Revised EA, p. 3-44), large tree structure important for nesting would be retained in the project area (Revised EA, p. 3-52). Preferred foraging areas, open areas with a brush component would remain functional as foraging areas for the golden eagle (Revised EA p. 3-44, 3-52).
- Snags and down coarse woody material would not be targeted for removal to maintain habitat for cavity nesting wildlife species (Revised EA, p. 2-12, 2-21, 3-50, 3-54, and 3-86).
- The implementation of project design features will minimize the potential for the introduction and spread of noxious weeds (Revised EA p. 3-102).
- Selective thinning which maintains large tree structure and 40 to 60 percent canopy closure, combined with mitigation (50 to 170-foot no cut buffer) developed through a collaborative process between the BLM and the Pacific Crest Trail Association allows for the persistence of the existing landscape character as observed from the PCNST. Therefore, long-term impacts to the trail and the trail user would not occur (Revised EA, p. 3-107).
- The total carbon dioxide emitted during the 20 year analysis periods is considered negligible in the context of total U.S. carbon dioxide emissions of 6 billion metric tons (Revised EA, 3-114). Within two years of thinning the carbon emission level for the 20 year analysis period would be offset by carbon storage in tree growth (Revised EA, p. 3-115).

See criteria number nine below for discussion of species listed under Endangered Species Act, candidate species, and additional discussion of special status species.

2. Not result in significant impacts on public health or safety.

No aspects of the Cottonwood Forest Management Project have been identified as having the potential to significantly and adversely impact public health or safety.

The following Project Design Features would be required to ensure public safety in areas of concentrated recreation use:

The designated skid trail crossing on the PCNST would be well marked and signed to alert PCNST users of logging operation; signs would be placed on haul routes where the PCNST crosses to alert drivers to the presence of the trail crossing; trees would be felled away from the PCNST; sign(s) would be placed on road 39-3E-3 at intersection with Hyatt Prairie road alerting the public of possible interactions with logging trucks and associated equipment during winter logging and hauling activities; sign(s) would be placed on road 39-3E-3, near yellow gate just southwest of Table Mountain Sledding Hill, instructing drivers to slow down and alerting drivers that pedestrians may be crossing the road; the purchaser would be required to post a flagger near the Table Mountain Snow Play parking area on road 39-3E-3 to provide for pedestrian safety if winter hauling is occurring on weekends or holidays (including designated holiday breaks for the local Rogue Valley public schools (Revised EA p. 2-32, 3-107).

Prescribed burning operations will follow all requirements of the Oregon Smoke Management Plan and the Department of Environmental Quality Air Quality and Visibility Protection Program, ensuring that smoke related impacts to public health and safety are mitigated (Revised EA, p. 3-116 to 3-117). By implementing actions to minimize smoke effects and by complying with DEQ regulations, smoke associated with the proposed action will not reduce air quality of the Medford/Ashland area.

3. Have no significant, adverse effects on unique characteristics of the geographic area.

No wilderness areas, wilderness study areas, prime farmlands, wild and scenic rivers (or rivers suitable for wild and scenic designation), caves, parks, refuge lands, or areas of critical environmental concern exist in the in the Cottonwood Forest Management Project Area.

Portions of the project area are located in an area proposed by the public as the Greensprings Mountain portion of the South Cascades Wilderness proposal. The proposed Greensprings Mountain Wilderness Area was previously analyzed for wilderness character by the BLM (Public Wilderness Proposal – Evaluation Form on file at Medford District BLM) and it has been determined that the area does not possess wilderness character. The BLM has retained authority to under Section 201 of FLPMA to inventory wilderness characteristics and to consider such information during land use planning. The wilderness characteristics analyzed were: 1) is the area of sufficient size; 2) is the unit in a natural condition; 3) does the unit have outstanding opportunities for solitude; and 4) does the unit have outstanding opportunities for primitive and unconfined recreation? The analysis showed that the area did not possess sufficient size (5,000 contiguous acres). The Greensprings Mountain portion was also determined to not be in a natural condition due to the presence of old harvest units throughout. Outstanding opportunities for solitude were found to be lacking because the unit is within the rural interface area. It was also determined that the Greensprings Mountain portion of the proposed South Cascades Wilderness does not possess outstanding opportunities for primitive and unconfined recreation due to its lack of outstanding features. It was determined that there are no wilderness characteristics present in the Greensprings Mountain portion of the South Cascades Wilderness proposal (Revised EA p. 1-9, 1-10, and 2-37).

4. Not have highly controversial environmental effects.

“Highly controversial”, in the context of 40 CFR 1508.27(b) (4), refers to substantial disagreement within the scientific community about the environmental effects of a proposed action. It does not refer to expressions of opposition or expressions of preference among alternatives or differences of opinion concerning how public lands should be managed.

The Cottonwood Forest Management project is similar in nature to many other forest management projects that have been implemented within the scope of the Medford District Resource Management Plan across the Medford District. The anticipated effects of harvesting timber, post-harvest fuels reduction, and new road construction, documented in the EA, are well known and no highly controversial effects have been identified.

The 2005 Report *Logging to Control Insects: The Science and Myths Behind Managing Forest Insect “Pests”*, also known as the Black Report, was submitted by several commenters during scoping to support their opinion that there is no evidence that logging can control bark beetles or defoliators once an outbreak occurs and in the long run could increase the likelihood of epidemics. This report was addressed in the EA as follows:

The Black Report was reviewed by Forest Health Protection Entomologists from Region 6 of the U.S. Forest Service in November 2005, who concluded that the report contained many erroneous statements that were not even supported by the report’s cited literature and included many citations taken out of their proper context. The Black Report was reviewed by BLM silviculturists who concur with the findings reported by Region 6 Forest Service entomologists. Many papers cited in the report support BLMs approach to managing forests to prevent bark beetle epidemics .

A recent paper, “*The effectiveness of vegetation management practices for prevention and control of bark beetle infestations in coniferous forests of western and southern United States* (Fettig et al., In Press), reviews tree and forest stand factors associated with bark beetle infestations and analyzes the effectiveness of vegetation management practices for mitigating the negative impacts of bark beetles on forests. The review draws from the examination of 498 scientific publications concerning the topic referenced above and other related topics. Fettig et al. reports that native tree-killing bark beetles are a natural component of forest ecosystems and periodic outbreaks will occur as long as susceptible forests and favorable climatic conditions exist. Recent epidemics of some native forest insects have exceeded historical records and management to reduce stand or landscape-level susceptibility must address factors related to tree density. Increased competition among trees for water, growing space, and nutrients causes trees to become stressed and compromises their resistance mechanisms, thus increasing their susceptibility to bark beetle attacks.

The report concludes that while gaps do exist in information available for some forest cover types and common bark beetle species, thinning as a preventive measure to reduce the amount of bark-beetle caused tree mortality and its effectiveness is supported by scientific literature for most forest cover types including mixed conifer forests, which are the primary focus of concern for bark beetle infestations in the Cottonwood analysis area. (Revised EA p. 3-75 to 3-76).

This article dispels the claim by some that scientific disagreement exists concerning the use of density management as a preventive measure to reduce bark beetle caused mortality.

Comments were received in response to the EA public review period for the Cottonwood EA stating disagreement with BLM's 2006 determination that the proposed Greensprings Mountain Wilderness did not possess wilderness character. Comments did not provide any evidence to support their claim that BLM's determination was in error. Comments represented a difference of opinion, or preference, concerning how BLM-administered lands in these areas should be managed. The BLM does recognize the value of the area for recreational use, especially those areas adjacent to the Pacific Crest National Scenic Trail. In order to minimize impacts to the PCNST and to protect and preserve the aesthetic and social characteristic within the trail corridor the BLM undertook a collaborative process with the Pacific Crest Trail Association (PCTA) in which project units were individually visited and a no cut buffer was determined based on various landscape components and the projects potential effect on PCNST users. Landscape elements such as topography, canopy cover, tree density, species composition, tree health, and vegetation screening that affect the view of the PCT user were used to determine a no cut buffer on a unit by unit basis. The unit specific outcomes from this process are described in the Revised EA (p. 2-33 to 2-35).

5. Not have highly uncertain and potentially significant environmental effects or unique or unknown environmental risks.

The analysis does not show that this action will involve any unique or unknown risks. The silvicultural prescriptions and harvesting methods (tractor and cable) are the same methods used on a regular basis for managing forest stands on BLM-administered lands. The anticipated effects of implementing the Cottonwood Forest Management Project are well supported with referenced literature throughout the EA, and are similar in nature to the effects estimated and observed for other timber sales implemented on the Medford BLM district.

6. Not establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.

The decision to implement the Cottonwood Forest Management Project will not set any precedents for future actions with significant effects. The Cottonwood Forest Management Project will implement actions approved for forest management under the 2008 Medford District Resource Management Plan and analyzed under the Final Environmental Impact Statement for the Revision of the Resource Management Plans of the Western Oregon Bureau of Land Management. It is therefore consistent with the types of projects envisioned in the 2008 BLM Resource Management Plan. The Cottonwood Forest Management Project was also designed to be consistent with the 1995 Medford District Resource Management Plan (Revised EA p. 1-5) and is consistent with actions implemented under the 1995 RMP for over a decade. This project is not precedent setting.

7. Not result in significant cumulative environmental effects.

Cumulative environmental effects are "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (See definition of "cumulative impact" in 40 CFR § 1508.7).

Analysis was performed at multiple scales, and included the consideration of past actions, as reflected in current conditions, current actions, and foreseeable future actions on both private and federal lands (EA, Chapter 3, Affected Environment & Environmental Consequences). No significant cumulative impacts were identified.

Also refer to criteria number one above for determination of presence of significant adverse or beneficial effects that could contribute to significant cumulative effects. None were identified.

8. *Have no significant effects on scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places.*

In accordance with the protocol for managing cultural resources on lands administered by the Bureau of Land Management (BLM) and the National Historic Preservation Act of 1966 (specifically section 106), as amended, a literature review and archaeological reconnaissance was conducted for the Cottonwood Project Area. Cultural resources recorded during the survey will be buffered and protected from project activities.

The project would not result in restricting access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites. No sites have been identified in the Project Area. Executive Order 13007 (Indian Sacred Sites) (Revised EA p. 3-117).

This project would have no effect on Indian Trust Resources as none exist in the Project Area. This project was determined to have no adverse effects on properties listed or eligible for listing on the National Register of Historic Places. This includes Native American religious or cultural sites, archaeological sites, or historic properties. The proposed project would have no adverse effects on any known cultural resources (Revised EA p. 3-117).

9. *Have no adverse effects on species listed or proposed to be listed as Federally Endangered or Threatened Species, or have adverse effects on designated critical habitat for these species.*

Northern spotted owls are “not likely to be adversely affected by the Cottonwood Forest Management Project. The project is designed to maintain existing northern spotted owl habitat in harvested units. Only 17 percent of suitable northern spotted owl nesting, roosting, and foraging (NRF) habitat would be treated within the analysis area, leaving about 83% of existing suitable NRF habitat untreated across the analysis area (Revised EA p. 3-47, 3-50).

Pursuant to the Endangered Species Act (ESA), formal consultation was completed with the US Fish and Wildlife Service. The Service concluded in its Letter of Concurrence (#13420-2010-I-0178) that the District’s proposed action is not anticipated to result in any incidental take and is not likely to adversely affect spotted owls, or spotted owl critical habitat within the action area (p. 14-15).

The Pacific fisher (*Martes pennanti*) was petitioned for listing as endangered or threatened under the Endangered Species Act on December 12, 2000. In 2003 the USFWS released their notice of 90-day petition finding and initiation of status review (68 Federal Register, No. 132, 41169-41174) and in 2004 published their Notice of 12-month petition finding, concluding that listing fishers as threatened was warranted, but was precluded by higher priority listing actions (Federal Register Vol. 69, No. 68, April 8, 2004, 18769-18792). The species remains a USFWS candidate species (USDI, USFWS 2004, 71 Fed. Reg. 53777, Sept. 12, 2006).

Alternative 2 would not contribute to the need to Federally list the fisher as threatened or endangered because habitat features, such as large snags and coarse wood, would be retained throughout the project area, which would provide habitat for denning and resting. Only 17 percent of the habitat within the analysis area would be harvested; harvest prescriptions are designed to maintain at least 60 percent canopy cover for northern spotted owls along with large tree structure, snags and downed coarse woody material. More than 83% of suitable habitat located within the analysis area would not receive any treatments (Revised EA p. 3-50, 3-51).

Portions of the Cottonwood analysis area are within the range of *Fritillaria gentneri*, a species listed under the Endangered Species Act with ranges on the Medford District. However, all units proposed for activity are outside of the range of *F. gentneri*. The Cottonwood analysis area is entirely outside the ranges of any other Federally Endangered species found on the Medford District (*Arabis macdonaldiana*, *Limnanthes floccosa* ssp. *grandiflora*, *Lomatium cookii*) (Revised EA p. 3-87).

There would be no effect on sites of special status or survey and manage botanical species as all sites will be protected as recommended by project design including seasonal restrictions or no treatment buffers, or a combination of both (Revised EA p. 3-93).

There are no federally designated threatened or endangered fish species in the Jenny Creek Watershed. As such, there is no designated critical habitat. The implementation of the Cottonwood Forest Management Project would have no effect on any listed fish species (Revised EA p. 3-24).

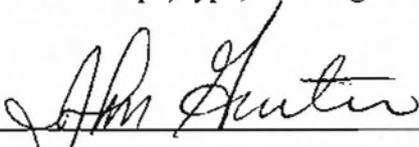
10. Not Violate a Federal, State, Local, or Tribal law, regulation or policy imposed for the protection of the environment.

Through analysis documented in the Revised EA, the BLM has determined that with implementation of required Project Design Features, the proposed action would not threaten a violation of any federal, state, or local environmental protection laws.

This project was reviewed for the potential for disproportionately high or adverse effects on minority or low income populations; no adverse impacts to minority or low income populations will occur (*Executive Order 12898 (Environmental Justice)*) (Revised EA p. 3-117).

FINDING

I have determined the Cottonwood Forest Management project does not constitute a major Federal action having a significant effect on the human environment; an environmental impact statement is not necessary and will not be prepared. This conclusion is based on my consideration of the Council on Environmental Quality's criteria for significance (40 CFR § 1508.27), with regard to context and intensity of the impacts described in the Revised EA, my understanding of the project, review of project analysis, and review of public comments. The analysis of effects documented in the Revised EA has been completed within the context of multiple spatial and temporal scales and within the context of the Medford District Resource Management Plan and the Northwest Forest Plan. The anticipated effects are within the scope, type, and magnitude of effects anticipated and analyzed in those plans.



John Gerritsma
Field Manager, Ashland Resource Area
Medford District, Bureau of Land Management

8/23/11

Date

APPENDIX A, PUBLIC INVOLVEMENT COMMENT ANALYSIS

Response to Comments Received for the Cottonwood Forest Management Project EA:

Written comments received in response to the Cottonwood Forest Management Project Environmental Assessment (Revised EA) were reviewed by the interdisciplinary team and responsible official. Substantive comments were identified and the BLM has responded to substantive comments listed below. The Cottonwood Forest Management Project EA was updated in response to comments received as well as to complete minor corrections.

Substantive Comments are those that:

- Provide new information pertaining to the Proposed Action or an alternative;
- Identify a new relevant issue or expand on an existing issue;
- Identify a different way (alternative) to meet the purpose and need;
- Identify a specific flaw in the analysis;
- Ask a specific relevant question that can be meaningfully answered or referenced;
- Identify an additional source of credible research, which if utilized, could result in different effects.

Non-substantive comments are those that:

- Primarily focus on personal values or opinions;
- simply provide or identify a preference for an alternative considered;
- Restate existing management direction laws or policies that were utilized in the design and analysis of the project (or provide a personal interpretation of such);
- Provide comment that is considered outside of the scope of the analysis (not consistent or in compliance with current laws and policies, is not relevant to the specific project proposal, or is outside of the Responsible Officials decision space);
- Lack sufficient specificity to support a change in the analysis or permit a meaningful response, or are composed of general or vague statements not supported by real data or research.

COMMENT ANALYSIS

This section contains comments received and the BLM's response to comments. Some comments listed below were received from more than one commenter. To avoid duplication, comment statements with similar content were summarized into one comment statement. The comments and responses are intended to be explanatory in nature and where applicable to guide the reader towards analysis or information contained in the Revised Environmental Assessment (Revised EA).

Comment 1: The EA did not provide an economic analysis. The removal of low volume per acre makes it difficult to economically treat these stands.

Response: Economics were analyzed throughout the planning and preparation of the Cottonwood project. A timber sale appraisal has been prepared for the proposed Cottonwood Timber Sale using standard BLM appraisal methods. The timber sale appraisal shows that based on current logging costs, road costs and pond value the sale, as proposed, would meet or exceed all requirements of being economically feasible to implement. It will be offered at an oral auction at appraised price and may be bid up to a higher selling price. A copy of the appraisal will be available at the time of the EA decision. It will be included with the timber sale prospectus.

Comment 2: We requested that BLM look at allowing mechanical harvesting and prebunching on slopes less than 45 percent. This is never mentioned or explained in the EA.

Response: The BLM did consider the use of mechanized harvesters in the EA (p. 2-16). This project was designed under the 1995 Medford District RMP which generally restricts ground-based yarding to slopes less than 35 percent.

Comment 3: The EA limits groundbased yarding to handfelling and bull lining trees to skid trails. This is not the safest or most economical method. The use of feller bunchers should be analyzed.

Response: The BLM did consider the use of mechanized harvesters in the EA (p. 2-16). Chapter 2 descriptions of yarding methods were updated to include a description of mechanized harvesting (Revised EA, p. 2-13).

Comment 4: We asked that BLM provide some flexibility in how fuels would be treated by focusing on the desired goals. The BLM has restricted fuels treatments to handpiling and burning. Contractors could use light weight equipment to treat fuels without detrimentally compacting soils.

Response: The commenter has not provided details on methodology or supporting science that would support the claim that machine piling could be done without detrimentally compacting soils in excess of RMP standards for percent area compacted by current activities.

Resource management plans calls for limiting compaction in harvested areas in order to minimize soil productivity losses. Therefore, no additional use of mechanical equipment for fuels reduction was proposed, as ground-based logging would compact up to 12 percent of the harvest units. This is particularly important in the Cottonwood planning area as the majority of the soils contain high rock content. It was identified that ripping the soils in this area would bring rocks and cobbles to the surface. The priority was given to minimizing the soil area compacted instead of trying to mitigate the effects. Additionally, the harvest prescription resulting in relatively few trees per acre being cut minimizes the slash, and consequently also reduces the need for mechanical fuel treatment.

Comment 5: We requested that BLM considered thinning in Riparian Reserves; by thinning the outer portions of the Riparian Reserves, residual trees will get bigger faster.

Response: Many considerations go into deciding whether or not to propose commercial thinning in Riparian Reserves. Under the 1995 RMP, the plan under which the Cottonwood project was designed, requires that silvicultural activities in Riparian Reserves benefit the conditions and function of Riparian Reserves. The cost of surveys and analysis needed to inventory and analyze the conditions of reserves is one consideration that management must take into account when deciding whether or not to propose Riparian Reserve thinning. Riparian Reserve thinning was not proposed under the Cottonwood Forest Management Project primarily due to funding and time constraints. Future treatments in Riparian Reserves may be considered.

The EA Chapter 2: *Alternatives and Actions Eliminated From Detailed Analysis* was updated to reflect this information (Revised EA, p. 2-37).

Comment 6: Page 2-10 explains, “The complex forest structure that forms NRF habitat consists of dead downed wood, snags, dense canopy, multi-storied stands or mid canopy. However SW Oregon NRF habitat varies greatly and one or more of these habitat components might be lacking or even absent.” How can it be classified NRF habitat if the area is lacking one or more of these components?

Response: To be classified as NRF habitat it is not necessary that a particular forest stand possess all NRF characteristics. Some combination of characteristics (dead downed wood, snags, dense canopy, multi-storied stands or mid canopy) must be present, but not all are required.

Comment 7: The EA is totally silent on the WOPR (Western Oregon Plan Revision). Before a decision is made the EA must describe how the project complies with the 2008 Medford District ROD/RMP.

Response: Planning and development of the Cottonwood project began prior to 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 Medford District's 2008 ROD and RMP. The forthcoming decision record will include a statement of compliance with the 2008 ROD and RMP.

Comment 8: Please avoid controversial actions that would ecologically degrade potential future additions to the Cascade Siskiyou National Monument.

Response: In accordance with NEPA, the public was given an opportunity to provide input on what issues should be addressed in the plan during the scoping phase of the planning process. In developing issues, the ID Team and responsible official specifically considered scoping comments that suggested that management of the project area should be consistent with the management of the Cascade Siskiyou National Monument and Wilderness Area. The EA provides a rationale for BLMs consideration of this issue and/or alternative action and the reason why this issue/alternative was not analyzed in detail. (Revised EA, p. 1-9 to 1-10, and 2-37). Suggestions for alternatives that would not meet the purpose and need articulated in the EA were not given detailed consideration.

Comment 9: BLM should drop the proposed logging in the unroaded area or prepare an EIS to address the potentially significant effects of logging and road building on disproportionately valuable ecosystem services provided by unroaded areas.

Response: The commenter did not identify which area or areas they felt were unroaded. Further, there are roads throughout the entire project area. The BLM defines a roadless area for the purposes of determining if an area meets size requirements necessary for being considered to have wilderness characteristics (Instruction Memorandum No. 2011-154) as having greater than 5,000 contiguous acres of roadless area. State or private lands are not included in making this acreage determination. In addition, size criteria will be satisfied in roadless areas of less than 5,000 acres of contiguous BLM lands where any of the following apply:

(a) They are contiguous with lands which have been formally determined to have wilderness or potential wilderness values, or any Federal lands managed for the protection of wilderness characteristics. Such lands include:

- i. Designated wilderness,
- ii. BLM Wilderness Study Areas,
- iii. U.S. Fish and Wildlife Service areas Proposed for Wilderness Designation,
- iv. U.S. Forest Service Wilderness Study Areas or areas of Recommended Wilderness, and
- v. National Park Service (NPS) areas Recommended or Proposed for Designation.

(b) It is demonstrated that the area is of sufficient size as to make practicable its preservation and use in an unimpaired condition.

(c) Any roadless island of the public lands.

The project area, no portion of the project area, or portion of the project area and adjacent area(s) meet the roadless size criteria for qualification as lands with wilderness characteristics.

If the commenter is generally talking about any area of BLM land that currently doesn't have a road on it that would have a road on it as a result of the project, EA Chapter three (3) in many places discusses effects of the building of 1.5 miles of road and the decommissioning of 1.9 miles of road. The proposed new road construction in T39-R3E sections 17 and 20 are in an area where other existing roads are present. New road construction resulting from this project does not occur in an area considered roadless. The project area, no portion of the project area, or portion of the project area and adjacent area(s) meet the roadless size criteria for qualification as lands with wilderness characteristics. The effects of the logging on the areas resources are well covered in Chapter three (3) of the EA.

Comment 10: The EA does not fully and accurately address the potential adverse cumulative effects of widespread forest density reduction on Pacific fisher or spotted owls; both species prefer relatively dense forests.

“Please note that page 3-50 of the EA contains no actual quantitative or qualitative information whatsoever about the baseline Pacific Fisher population dynamics or habitat in the planning area in the context of the No Action Alternative.”

Response: See the Affected Environment-Pacific Fisher portion in the EA (Revised EA, p. 3:42-43). Acres of habitat are noted. Population dynamics are poorly understood for fishers in this portion of their range.

“Page 3-43 of the EA indicates that fishers have been “detected” in the analysis area. The term “detected” does not convey any qualitative or quantitative information to the reader. Where were surveys conducted? Over what timeframe? How many fishers were “detected?” What are the population trends and dynamics for fisher populations in the Ashland Resource Area? How will the proposed timber sale impact those dynamics?”

Response: One fisher was photographed once at a baited camera station east of Hyatt Reservoir. Baited camera survey stations have been deployed in a dispersed, rotational pattern throughout southern Jackson and Josephine counties over the past several years. Population trends are unknown for this area. Population dynamics are poorly understood. Effects to the population of fishers from the proposed actions were based on the use of effects to habitat as a proxy.

“The EA contains no useful information that would reliably inform a finding that road construction and logging in the action area would not contribute to the need to list fisher.” “The EA states “fishers are highly mobile and have large home ranges and would likely move to another part of their home range while the activity is ongoing.” Id. at 3-50. But there is no information about how many home ranges exist or the quality of habitat available to individual fishers that BLM presumes will move out of its way.”

Response: The amount of land area that is proposed for treatment and/or road construction is a small proportion of available fisher habitat, as noted in the EA (p. 3:50-51). Thus, these activities would not be expected to contribute to the need to list fisher. This is due to the fact that effects to one or several fisher home ranges (and, in this case, effects that are anticipated to retain habitat function) are not expected to significantly alter population dynamics.

“The EA overlooks scientific uncertainty about effects of the proposed action to fisher at a population scale.”

Response: The information available rarely addresses all of the questions at hand, meaning there is usually some degree of uncertainty. However, silvicultural prescriptions are designed to maintain the current function of existing spotted owl nesting, roosting, foraging, and dispersal habitat within the Cottonwood project units, and 83 percent of the existing northern spotted owl nesting, roosting and foraging habitat within the analysis area would remain untreated (Revised EA, p. 3-51). Therefore, while some scientific uncertainty may exist at the population scale for fishers, forest stands within the Cottonwood Forest Management Project and analysis area would continue to function at their current capacity for providing for landscape-scale habitat for fishers.

The BLM’s use of northern spotted owl habitat as a proxy for fisher habitat is flawed.

Response: The use of northern spotted owl habitat as a proxy for fisher habitat is based on legal precedent (*KS Wild v. US BLM*, Case No. 06-3076-PA, Order and Judgment 9/10/2007).

“The EA acknowledges that cumulative effects are likely to occur in Pacific fisher habitat, but the rate of habitat loss or specific locations are not known to the agency. EA at 3-55. Where the BLM can quantify cumulative impacts to fisher habitat on adjacent Federal lands resulting from the Sampson Cove project, it fails do so. It assumes “no potential ... to contribute to significant adverse cumulative effects...” simply because Cottonwood and Sampson Cove would maintain spotted owl NRF habitat. As explained above, spotted owl habitat is not a reliable proxy for Pacific fisher. Moreover, both projects may overlap individual home ranges of the animal and simultaneously cause disturbance effects at a home range scale.”

Response: The potential for cumulative effects to Pacific fisher were addressed in the EA (Revised EA, p. 3-57). See above response regarding the use of northern spotted owl habitat as a proxy for fisher habitat. Due to the maintenance of habitat function in the Cottonwood project area for the Pacific Fisher, there is no potential for the Cottonwood project to contribute to significant adverse cumulative effects to the fisher.

Comment 11: The agency needs to address significant new issues that were not addressed in the Northwest Forest Plan FEIS in their project level NEPA analysis. Specifically the following new issues need to be addressed:

The Cottonwood Forest Management Project Environmental Assessment documents the site specific analysis conducted to determine the effects of implementing the Cottonwood Forest Management Project. Amending BLMs Resource Management Plan is beyond the scope of analysis with this project specific environmental analysis. That being said, the following responds to the specific issues you believe need to be addressed, and BLMs explanation of how these were addressed in the analysis.

Issue a. There is an urgent need to protect additional suitable owl habitat in order to increase the likelihood that newly invading barred owls can coexist instead of competitively exclude spotted owls.

Response: The Cottonwood project units were evaluated to locate habitat suitable for the provision of refugia for northern spotted owls as set forth in Recovery Action 32 of the Recovery Plan for the Northern Spotted Owl. All habitat meeting the “RA 32” criteria were set aside and are excluded from treatment under this project proposal (Revised EA, p. 35).

Issue b. Commercial logging likely comes with significant costs in terms of forgone carbon storage.

Response: A carbon analysis was conducted for the Cottonwood Forest Management Projects and the results are documented in the EA. Alternative 1 would result in higher carbon storage over a 20 year analysis period. However, the effects of the Cottonwood Forest Management project on carbon storage are insignificant. The total carbon dioxide emitted during the 20 year analysis period, slightly under 8000 tonnes (Revised EA, p. 3-115), is considered negligible in the context of total U.S. carbon dioxide emissions of 6 billion metric tons (Revised EA, 3-114). Within two years of thinning the carbon emission level for the 20 year analysis period would be offset by carbon storage in tree growth (Revised EA, 3-115).

Issue c. If climate change brings and increasing frequency and severity of drought and natural disturbance, it may be harder to sustain existing older forests and harder to establish new forests and sustain them through long periods of succession required to reach habitat goals.

Response: The proposed thinning treatments are designed to retain late seral components of existing older forests through the management of growing space and species selection for large tree structure. Tree species that are better adapted to long periods of drought stress and natural disturbance agents, such as incense cedar and ponderosa pine, are favored over species less equipped to adapt to natural disturbances. Thinning treatments are designed to increase growing space and decrease competition for large or legacy pine, oak, and cedar (existing genotypes which are physiologically better adapted to fire disturbance). Trees with old-growth characteristics, including Douglas-fir and white fir species, are also favored for retention and are equally important in the later stages of forest succession as it relates to wildlife habitat.

Issue d: Dead wood standards: The Northwest Forest Plan standards for dead wood are based on outdated “potential population” methodology which greatly underestimates the number of snags needed to meet the needs of a variety of species associated with dead wood. The agencies should follow NEPA procedures to amend their plans, consider alternatives, and adopt new standards that assure objectives are met over time and across the landscape. Commenters submitted Rose , C.L., Marcot B.G., Mellen, T.K., Ohmann, J.L. Waddell, K. L. Lindely D.L., and B. Schrieber. 2001. Decaying Wood in the Pacific Northwest Forests: Concepts and Tools for Habitat Management, Chapter 24 in Wildlife Habitat Relationships in Oregon and Washington (Johnson, D.H. and T.A. O’Neil. OSU Press. 2001).

Response: Again, the Cottonwood Forest Management Project Environmental Assessment documents the site specific analysis conducted to determine the effects of implementing the Cottonwood Forest Management Project. Amending BLMs Resource Management Plan is beyond the scope of analysis with this project specific environmental analysis. The Cottonwood Forest Management Project does not target the removal of existing snags or downed coarse woody material. An estimated 12,440 feet of transects were sampled and the average coarse woody material per acre equaled 1,442 linear feet per acre (Revised EA, p. 3-65). Follow-up activity fuels treatments and maintenance underburning is designed to treat small diameter fuels and retain large downed wood and snags important for wildlife habitat (Revised EA, pp. 3-49 to 3-51, 3-85 to 3-86).

Issue e: Agencies have little justification for sacrificing public forests to produce wood products when the wood product market is quite depressed. Withholding wood from the market may help improve prices for owners of non-federal timber who rely on selling some trees for income.

Response: The allocation of BLM-administered lands to timber resource management occurred with BLM's Record of Decision and Resource Management Plan. The Medford District's RMP is governed by the statutory mandate for O&C lands and declared an "annual sustained yield capacity" on the Matrix land allocated for timber production, which the O&C Act requires to be offered annually so long as it "can be sold at reasonable prices on a normal market." Timber products produced from this area would be sold in support of the District's Allowable Sale Quantity declared in the RMP. Furthermore, there is a demand for timber on the open market as evidenced by BLMs recent timber sale results. In July the Deer North timber sale sold for almost twice its appraised value; the sale was appraised at \$127,745 and the bid price was \$248,733.

Comment 12: The NEPA analysis must fully disclose the adverse effects on spotted owls and their prey when habitat quality is reduced from optimal to suitable. The NEPA analysis must show how removing large amounts of woody structure will in fact maintain the woody structure needed to develop high quality spotted owl habitat.

Response: "Optimal" is not defined. No habitat is designated as "optimal" by BLM. BLM's NEPA analysis does quantify the percentages of habitat being treated in the watershed containing the Cottonwood Forest Management Project. All northern spotted owl habitat treated in the Cottonwood Forest Management Project is expected to continue to function as it currently does (Revised EA, pp. 3-47 to 3-50).

Occupied spotted owl sites tend to have higher densities of trees both large and small compared to sites that are unoccupied (R. Everette, et al., 1997). Structure of northern spotted owl nest stands and their historical conditions on the eastern slope of the Pacific Northwest Cascades, U.S.A., Forest Ecology and Management. 94:1-14).

Response: This study (R. Everette, et al., 1997) took place in a different physiographic province. The forests in that province are composed of different tree species in very different settings than those of the Oregon Western Cascade province. The results are not directly transferrable.

Flying squirrels need lots of mid level visual occlusion provided by mid-canopy vegetation layers and abundant tree boles (T.Wilson. 2010. Limiting factors for Northern Flying Squirrels in the Pacific Northwest: A spatio-temporal Analysis. PhD dissertation. Union University, Cincinnati, Ohio.

Commenters also quoted from North, Franklin Carey, Forsman, Hamer. 1999. Forest Stand Structure of the Northern Spotted Owls Foraging Habitat. For. Science 45(4): 520-527, stating : "stands with 142 m³/ha of intact snags and high diversity of tree heights had medium or high foraging use by spotted owls. In these old-growth stands, biological legacies (e.g. large trees and snags) produced by past disturbance provide important forest structures associated with spotted owl foraging."

Response: The EA discloses information about spotted owl prey and their habitat (Revised EA, p. 3-48). The EA also mentions that treatment implementation would be spread out temporally and spatially within the Planning Area, which would provide areas for spotted owl foraging during project implementation and reduce the impact of these short-term effects at the project

level. Various wildlife and botany buffers, riparian areas, marking guideline restrictions, and no treatment areas adjacent to the units will continue to provide untreated habitat for prey species. While some reports suggest negative impacts of thinning on flying squirrels (Wilson 2010), there is also some counter information as to these effects (e.g., Gomez et al. 2005, Ransome et al. 2004, Waters and Zabel 1995).

Comment 13: The ecological benefits of mistletoe should not be under-estimated.

“The abundance and diversity of birds is correlated with the degree of mistletoe occurrence, and avian vectors seem to prefer infected hosts. See Aukema, J.E. 2003. Vectors, viscin, Viscaceae: Mistletoes as parasites, mutualists, and resources. *Frontiers in Ecology I(3): 212-219.* and Watson, D.M. 2001. Mistletoe — A keystone resource in forests and woodlands worldwide. *Annu Rev Ecol Syst 32: 219-249.*”

It has also been reported that approximately 90% of known spotted owl nests on the Applegate Ranger District of the Rogue River National Forest were in dwarf mistletoe brooms in Douglas-fir trees. Marshall, David B., MG Hunter, and AL Contreras. 2003. *Birds of Oregon. A General Reference. Chapter 3. Oregon State University Press, Corvallis, OR.*”

Response: The ecological benefits of mistletoe to wildlife are discussed (Revised EA, pp. 3-47, 3-54 to 3-55, and 3-76). Mistletoe is common throughout this project area, watershed and surrounding watersheds. The limited removal of select trees with mistletoe will not significantly change the availability of mistletoe structures for use by wildlife species in these areas.

Comment 14: Logging northern spotted owl to save it from fire is unsupported by evidence. Commenter submitted paper by Doug Heiken Log it to save it.

Response: The paper *Log It to Save It: The Search for an Ecological Rationale for Fuels Reduction Logging in Spotted Owl Habitat* is a report prepared by Doug Heiken of Oregon Wild. In this report the author presents his argument against commercial logging for the purpose of fuels reduction. As identified in Chapter 1 of the EA, the purpose and need for the Cottonwood Forest Management Project is to manage forests to provide for long-term sustainable timber production (Revised EA, p., 1-3) while maintaining the current distribution of northern spotted owl habitat in the Cottonwood Project Area (Revised EA, p. 1-4). While not the primary purpose, fuels reduction is described as a beneficial effect of forest management (including the treatment of activity fuels generated from timber harvest). The EA describes that one effect of the Cottonwood Forest Management Project would be to improve the fire resiliency of stands treated by focusing on the retention and promotion of more fire resilient species such as pine and incense cedar, reducing surface and ladder fuels, and focusing on the retention of large diameter trees (Revised EA, pp. 2-10 to 2-12 and 3-47 to 3-48).

Comment 15: The BLM did not consider and analyze an adequate range of alternatives; only one action alternative was developed and analyzed in detail. The BLM received numerous suggestions for reasonable alternatives that could have been developed

Response: The purpose and need of the Cottonwood Forest Management Project is to implement forest management to provide for long-term sustainable timber production consistent with the Medford District RMP (Revised EA, p. 1-3). Suggestions for alternatives that would not meet the purpose and need articulated in the EA were not given detailed consideration. The rationale for eliminating actions or alternatives from detailed consideration is included in the EA Chapter 2, Section D, *Actions and Alternatives Considered but Eliminated from Detailed Analysis*. For example, the BLM specifically considered management of the project area consistent with the proposed expansion of Cascade Siskiyou

National Monument and proposed Greensprings Mountain Wilderness Area, no new road construction, diameter limits for tree harvesting. The EA provides a rationale for BLMs consideration of these alternatives that were not analyzed in detail. (Revised EA, pp. 2-35 to 2-37)

The Ninth Circuit has rejected the argument that an EA requires consideration of more than two alternatives. See *Native Ecosystems Council v. Forest Service*, 428 F.3d 1233, 1246 (9th Cir. 2005). Further, in the *Morongo Band of Mission Indians v. Federal Aviation Admin.*, 161 F.3d 569, 576 (9th Cir. 1998), the Ninth Circuit held that parties claiming a NEPA violation involving failure to consider a reasonable alternative must offer a specific, detailed counterproposal that has a chance of success. Also an agency does not have to consider alternatives that are not feasible, (See *Headwaters, Inc. v. BLM*, 914 F.2d 1174, 1180-1181 (9th Cir. 1998)), and an agency does not have to consider alternatives that would not accomplish the purpose of the proposed project. See *City of Angoon v. Hodel* 803 F.2d 1016, 1021 (9th Cir 1986).

Comment 16: None of the findings of the Jenny Creek Watershed are referenced in the Cottonwood EA. The following findings contained in BLMs watershed analysis (Jenny Creek Watershed Analysis) were raised to BLM during the scoping process for this project:

“The Jenny Creek Watershed is far from achieving [the] desired future condition. Of the estimated 76.5 miles of perennial streams in the watershed, only one half mile of upper Shoat Springs Creek is in proper functioning condition.”

-Jenny Creek Watershed Assessment and Analysis, Medford District BLM, page 93.

Response: As stated in EA p. 3-23: “4) The Jenny Creek Watershed Assessment assumed that only 0.5 mile of 76.5 miles of perennial streams in the Jenny Creek Watershed were in Proper Functioning Condition in 1995. At the time the WA was written, on the ground surveys had not been conducted on many stream reaches within the watershed. Perennial reaches within the analysis catchments were found to be PFC after on the ground surveys were conducted in 1999.”

“[The WA recommends] Road density reduction targeting subwatersheds and drainage areas with particularly high road density....-Jenny Creek Watershed Assessment and Analysis, Medford District BLM, page 87.”

Response: The Cottonwood Forest Management project proposes 1.9 miles of road decommissioning (Revised EA, p. 2-4); overall there will be a net reduction in permanent road density. Road decommissioning is planned in Riparian Reserves which is also a high priority for road decommissioning (Revised EA, p. 3-32 to 3-33).

“Forest pathogens probably contribute more to diversity in forest structure and the landscape patter of the watershed than fire.”

-Jenny Creek Watershed Assessment and Analysis, Medford District BLM, page 28.

Response: You submitted the above excerpt from the Jenny Creek Watershed Analysis (WA) and suggest that it must be addressed in the EA. The BLM does not dispute; rather it recognizes the contribution of forest insects and pathogens, as well as other natural and anthropogenic disturbances, to the structural diversity of forest stands in the Cottonwood Forest Management Project Area (Revised EA, pp. 3-57, 3-59 to 3-63). The BLM designed prescribed silvicultural treatments to reduce the impacts of forest insects and disease on forest stands in order to promote vigorously growing conifer forests. Forest treatments also contribute to BLM’s mandate to produce long-term sustainable timber production (Revised EA, p. 1-3) the primary objective of the Cottonwood Forest Management Project. The BLM also recognizes, as documented in the

EA, that silvicultural treatments will not eradicate forest pathogens endemic to the site, they will only reduce the impacts on forest stands treated by encouraging resistant species, slowing the spread of disease, and improving the ability of forest stands to provide for long-term sustainable forest production. Pathogens will still remain within stands treated (but to a lesser degree) as well as within stands not treated, and will continue to contribute to the structural diversity of forest stands in the planning area.

Comment 17: Temporary road construction still results in long-term impacts to soil health and productivity even though it is described as temporary.

Response: The EA addressed the effects of both permanent and temporary roads on soil productivity (Revised EA, p. 3-10). Roads cause a disturbance on the landscape that generally increases off-site erosion and reduces soil productivity (soil's capacity to support vegetation growth). About 4 acres of land is taken out of vegetation production for every one mile of road proposed; the 2.1 miles of new construction (1.5 permanent and 0.6 temporary) would take approximately 8.4 acres out of vegetation production (Revised EA, p. 3-10). Temporary roads are normally built, used and decommissioned during the same dry season. This measure reduces the amount of off-site erosion and ameliorates the productivity losses. Additionally, an estimated 1.9 miles of roads would be decommissioned (Revised EA, pp. 2-4 and 3-10).

Comment 18: The proposal to construct a permanent logging road through a wet meadow, a Riparian Reserve, and late-succession forest in a key watershed is not informed by the findings and recommendations of the Jenny Creek Watershed Analysis and will have significant environmental effects that necessitate the completion of an EIS.

Response: The characterizations and recommendations contained within the Jenny Creek Watershed Analysis (WA) indicate that high road densities exist within several sub-basins. The BLM has disclosed this information in the EA (pp. 3-15 to 3-16). The WA recommends reducing road densities, targeting sub-watersheds and drainage areas with particularly high road densities and areas of fragile soils as the highest priority. As disclosed in the EA, 10.1 miles of road have been decommissioned by the BLM within Jenny Creek thus far (p. 3-21).

The Cottonwood Timber Sale proposes construction of 1.5 miles of new permanent road, coupled with 1.9 miles of road decommissioning (Revised EA, pp. 2-3 to 2-5). This proposal will result in a decrease of 0.4 miles in overall road densities in addition to the 10.1 miles identified above. Of this, new road construction would impact 330 feet of Riparian Reserves (Revised EA, p. 3-36), while decommissioning would benefit 0.84 miles of Riparian Reserves (Revised EA, p. 3-32), resulting in a net reduction of over 0.8 miles of riparian road through the proposed roadwork in the Cottonwood sale.

What you characterize as a "wet meadow" is a grassland adjacent to an intermittent stream, lacks vegetation characteristic of wet meadows, and is dry much of the year. The new road BLM proposes intersects the meadow at a right angle, minimizing disturbance to the extent possible. The anticipated effects to aquatic habitat and organisms from new road construction were described in the EA:

From EA p. 3-31: "However, new road "A" would have hydrological connectivity with aquatic habitat, and would necessitate disturbances both within the stream channel, and within a Riparian Reserve. As such, construction of this road would likely result in small inputs of sediment to the intermittent stream channel. Stream temperatures would not be adversely affected, as the stream in the project area is intermittent and dry during the summer months."

From EA p. 3-32: “...it is anticipated that small amounts of disturbed soil would remain in and adjacent to the channel in the vicinity of the crossing. Estimates based on observations of similar projects suggest that direct sediment contributions to the channel resulting from the culvert work would be less than 1 cubic foot of sediment at the crossing (USDI, 2010)” and “Indirectly, intercepted water could potentially be transported down the road causing erosion and rutting. However, the potential for rutting would be slight, as the road would be low gradient, and drainage features would be incorporated into its design, allowing the road to shed intercepted water off the surface and into downslope vegetation. As such, BLM anticipates that indirect inputs of sediment and/or turbidity resulting from new road ‘A’ would not be discernable above background levels.”

Regarding hydrologic connectivity, note that there would be no system of ditches, culverts or channels that would directly convey runoff from the road to the stream channel.

Regarding the significance of effects from new road construction on fish and aquatic habitat, from EA p. 3-32: “In any event, sediment contributed to aquatic habitat as a result of the proposed new road construction would not meaningfully impact fish habitat in Little Hyatt Lake; the small contributions from the road would eventually find its way into the reservoir, where it would be stored and assimilated into the existing mud substrate bottom.”

Comment 19: The BLM failed to address and avoid the negative impacts of road construction and use, on terrestrial and aquatic ecosystems, outlined in the peer-reviewed article Trombulack [sic] and Frissell (2000). This article was submitted with our scoping comments.

Response: The article by Trombulak and Frissell characterizes effects to terrestrial and aquatic systems from roads in general, and which includes highways and freeways in the discussion of effects. Much of the discussion centers on effects to terrestrial wildlife and botanical resources, and the portions dedicated to aquatic habitat are relatively general in nature, and make no distinctions between effects and size, use, and location of roads relative to aquatic systems. As such, much of the discussion in the article is of limited application to the proposed new road in regards to effects to aquatic habitat, which would be closed to the general public, receive only limited traffic during the dry season, and only be utilized sporadically (i.e. not a freeway). What is most applicable to aquatic habitat in this instance is the potential for the road to contribute effects similar to many of those discussed under the heading “disruption of the physical environment” (pp. 21-24) of the article. Along these lines, the fish/aquatic habitat analysis includes extensive discussion of effects to aquatic habitat resulting from new road construction on (Revised EA, pp. 3-31, 3-32, and 3-34) and also includes a discussion of effects resulting from haul (Revised EA, pp. 3-33 to 3-34). The analysis acknowledges that sediment would be input into aquatic habitat by these activities. This is not in disagreement from road related effects to aquatic habitat as stated in Trombulak and Frissell.

In regards to hydrology, the article summarizes some of the effects anticipated as a result of roads on aquatic ecosystems. As discussed in the EA, the primary concern resulting from road construction and maintenance is a potential increase in sediment production and transport to stream channels. The EA extensively discusses the effect of roads and discloses that there may be minor short-term increases in sediment and turbidity (Revised EA, p. 3-22).

Comment 20: There is no quantitative or qualitative data or analysis of the impacts of new road construction. The EA states that up to 6 temporary spurs ranging from 50 to 500 feet in length could be constructed.

Response: For the purpose of analysis the EA assumed that all six (6) of the Temporary roads would be constructed (Revised EA, p. 2-3). Their locations were included on Maps 2-1 through 2-4 of the Environmental Assessment. The effects of road construction are addressed in the EA for each resource. The EA also goes on to acknowledge that, “the newly constructed temporary roads will be decommissioned using various techniques to preclude vehicle use” (Revised EA, p. 3-20). This would include any temporary spurs that would be constructed during project implementation. As discussed in the EA, if project design features (PDFs) specific to road closures are not adhered to the result is a potential increase of unmanaged OHV trails leading to elevated sediment rates and adverse impacts to soils and other resources (Revised EA, p. 3-21). Otherwise, these features when decommissioned properly are considered hydrologically recovered due to their decompacted condition and vegetative recovery that occurs.

Comment 21: BLM proposes to authorize tractor logging on short pitches exceeding 35 percent slope, yet the location, acreage, and impacts of steep slope tractor skid trails are not disclosed in the EA. This will have significant direct and cumulative impacts to soil resources.

Response: The landscape is not homogeneous, and in some instances the topography of a hillslope may be slightly steeper than 35 percent for a short distance. It is not feasible to identify every short pitch that may be over 35 percent slope across the landscape but priority is given to insure that ground-base yarding of timber occurs on slopes 35 percent or less. In instances where small areas slightly exceed 35 percent, the tree is felled toward the less steep area (35 percent or less) and winched toward the ground-base equipment. Every effort is made to keep ground-based equipment off of slopes exceeding 35 percent.

Comment 22: The BLM appears to be authorizing tractor firelines, yet no analysis of impacts associated with tractor fireline is disclosed in the EA. This will have significant direct and cumulative impacts to soil resources.

Response: No tractor firelines are proposed for prescribed fire activities associated with the proposed action. The Project Design Feature is submitted by soil and watershed specialists as standard practice in the case that tractor firelines might be considered for a project. The EA was revised to clarify that only hand firelines would be used during prescribed fire activities. No additional analysis is warranted.

Comment 23: The National Marine Fisheries Service describes that forests with greater than 2 miles or roads per square mile are not properly functioning for aquatic and fisheries values. Page 3-11 of the EA reports the current road density for the Jenny Creek Watershed is 5.8 miles per square mile, almost three times that of NMFS trigger point. The Cottonwood EA does not address this information.

Response: The NMFS benchmarks for Proper Functioning Condition were developed for ESA consultation and come from the matrix of pathways and indicators for the Klamath Province/Siskiyou Mountains. The matrix considers greater than 3 miles (not 2) of road per square mile as not properly functioning. The matrix also includes the following description: “High road densities (use >3 mi/square mile for reference), valley bottoms well-roaded, effects on stream channel and riparian function are evident.” Effects on stream channel and riparian function from roads are not well evident in the fish bearing reaches of the analysis area streams. Significance has different meanings and levels of magnitude for NEPA and ESA, and hence the NMFS benchmarks were not reported in the EA, as there are no listed fish species in the watershed (Revised EA, p. 3-24), and therefore the NMFS benchmarks you refer to are not relevant as there is no ESA consultation.

Regardless of all this, the EA does acknowledge that road densities are higher than desirable (Revised EA, pp. 3-22, 3-23 and 3-29). However, road density is a coarse indicator of effects to aquatic habitat, as

not all roads contribute the same affects to aquatic habitat (Revised EA, p. 3-15). Rather than base effects conclusions on the fact that road densities are “high,” it is more prudent and relevant to look at the habitat which would be impacted by the roads; from a fish/aquatic standpoint, that habitat indicator is fine sediment, which was found to be relatively low in the fish bearing streams within the analysis area, with the exception of Jenny Creek (Revised EA, pp. 3-23 and 3-30).

Comment 24: The EA references there will be a 15-50 percent increase in erosion rates from logging activities, representing a slight to moderate increase. Why is 15 percent considered slight and 50 percent increase considered moderate?

Response: Many studies focusing on the effects of timber harvest report the percent area which has been disturbed. Although not as useful as erosion data, data on soil disturbance is presumed to be closely correlated¹ (Rice et.al., 1972). As the amount of disturbance anticipated in a management unit is relatively small (15 percent with ground base logging and 3 percent with skyline cable yarding) (WOPR, 2008, pg. 4-838), the erosion potential is anticipated to increase approximately 15 to 50 percent depending on topography, soil type, amount of disturbance, residual slash/organic matter, rainfall intensity, rainfall duration and rainfall amount.

The erosion potential qualitative identifiers, slight and moderate, help put some perspective on the potential effects. The erosion rate reflects an equilibrium between the erosion and soil forming processes, as moderated by vegetative cover on the site. Swanson and Dyrness (1975) estimated the natural erosion rates for soils in the Western Cascade Range to be about 0.19 yd³/ac/year and erosion rates increased in harvest areas to 0.7 yd³/ac/yr (in Amaranthus, 1985, p. 233²). The erosion rate increase in this study took into account debris slides and mass erosion of steep slopes across the landscapes where the trees were clearcut. The increase in erosion rates was nearly 3.7 times (370 percent increase) this Western Cascade Range study. In other areas, studies document up to 50 times increase in erosion rates, which could equate to a qualitative identifier of high or extreme.

As stated in the Environmental Assessment, erosion rates are highly dependent on numerous factors, including the intensity and amount of rainfall that a particular site receives in a given time period (Revised EA, p. 3-4). As most of the harvest units are on slopes up to 40 percent with a very slight potential for landslides, it is anticipated that erosion rates in the project area would be much less than those reported by Swanson. When qualitatively identifying erosion rates of 3 times as high, it seems appropriate to identify an increase of 15 percent or less as slight effect, and above 15 to 50 percent increase as moderate effect on the soil resource, especially pertaining to soil productivity.

Comment 25: The EA describes (p. 3-15) that many roads within the analysis area are unsurfaced and located in Riparian Reserves, and some natural surfaced roads are open during the wet season. Details on how many roads are unsurfaced or located within Riparian Reserves are not quantified.

Response: The analysis associated with this proposal discloses the length of unsurfaced roads both within and outside Riparian Reserves that will be utilized for timber haul and other uses (Revised EA, p. 3-33). The analysis focuses on these roads because that is where the impacts associated as a result of

¹ Rice, R. M.; Rothacher, J. S.; Megahan, W. F. 1972. Erosional consequences of timber harvesting: an appraisal. In: Proceedings of a national symposium on watersheds in transition; Urbana, IL: American Water Resources Association: 321-329.

² Amaranthus, M.P., R.M. Rice, N.R. Barr, and R.R. Ziemer. 1985. Logging and forest roads related to increased debris slides in southwest Oregon. Journal of Forestry, Vol. 83, No. 4, pp. 229-233.

implementing this proposal will occur. Although not summarized by surface type, information on total road lengths, including those within Riparian Reserves for the entire analysis area is utilized for road density analysis and is located within the project files.

Comment 26: The EA indicates that BLM is aware that there is an expanding network of OHV trails in the planning area that “exist on the landscape irrespective of sensitive soils, adequate drainage, or proximity to watercourses and are also responsible for increased sediment production.” These OHV routes have similar impacts to hydrology, soils, and wildlife, yet the location, number, or cumulative impacts of these OHV trails are not disclosed or analyzed.

Response: The BLM’s assessment of cumulative effects includes a detailed air photo analysis of both authorized (system) and unauthorized (non-system) routes, including OHV trails existing at the time the photographs were taken. This information is utilized in all aspects of the analysis, including road density and increased potential for sediment delivery, as disclosed in the EA (Revised EA, p. 3-8, 3-15, 3-16).

Comment 27: The cumulative impacts on sediment and erosion rates as a result of timber hauling on natural surfaced roads is not quantified.

Response: The cumulative impacts of timber haul on all roads, including natural or native surfaced is disclosed. The analysis focuses on road density and road density within Riparian Reserves where erosion and sediment delivery to streams presents an elevated likelihood due to the roads proximity to any surface water that may be present. The analysis within the Water Resources Cumulative Effects discussion (Revised EA, pp. 3-21, 3-22) concludes that sediment production resulting from road use and construction may increase in the short term. Since the cumulative effects analysis is predicated on road density at the 7th field drainage scale, the EA quantifies that within Riparian Reserves, road density would decrease substantially (16%) within drainage 0503, and remain the same within the others (Revised EA, p. 3-22). In addition, the analysis associated with this proposal discloses the length of unsurfaced roads both within and outside Riparian Reserves that will be utilized for timber haul and other uses (Revised EA, pp. 3-33 to 3-36).

Comment 28: The BLM reveals in the EA (p. 3-21) that “actions included in this proposal that have a higher probability of sediment delivery include road use and maintenance, cable and tractor yarding and road construction.” The impacts from these practices are not quantified? How can these impacts be avoided?

Response: As mentioned previously sediment delivery resulting from road use, maintenance, and construction is both quantified and discussed in numerous portions of the Water Resources and Fisheries and Aquatic Habitat analysis. Furthermore, sediment delivery resulting from cable and tractor yarding is quantified and discussed in the Soil Resources section of the EA (Revised EA, pp. 3-8 to 3-12). The impacts are primarily avoided through the application of both planning and implementation Best Management Practices (BMPs). These are discussed throughout the document and are summarized in Chapter 2, pp. 2-14 to 2-18.

Comment 29: The BLM’s reliance on the illegal Bush-Administration CEQ guidance to avoid documenting site-specific cumulative impacts from past agency actions is misplaced. Caselaw in the Ninth Circuit is clear, the BLM must provide substantive quantitative and qualitative information about the significant environmental impacts of past and foreseeable agency actions in this planning area.

Response: In regards to your statement that the BLM is relying on “illegal Bush-Administration CEQ guidance,” the Ninth Circuit Court of Appeals has on no less than three occasions rejected your view of the CEQ Guidance. *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. U.S. Forest*

Serv., 549 F.3d 1211, 1217-18 (9th Cir. 2008); *Ecology Ctr. v. Castaneda*, 574 F.3d 652, 666 (9th Cir. 2009); *League of Wilderness Defenders-Blue Mts. Biodiversity Project v. Allen*, 615 F.3d 1122, 1136 (9th Cir. Or. 2010)

The BLM conducted a site specific environmental analysis for the Cottonwood Forest Management Project as required by NEPA. The analysis included an assessment of the direct, indirect, and cumulative effects (Revised EA, Chapter 3).

Comment 30: BLM concludes in the EA (page 3-23) that “elevated sediment and turbidity levels are occurring as a result of an extensive road network and other disturbances such as OHV use.” Which streams are subject to this elevated sediment and turbidity? Which roads are the primary producers of sediment and turbidity? Can these impacts be quantified? Exactly how much will project activities contribute to these impacts?

Response: It is not possible to quantify the amount of sediment/turbidity contributed from each specific source; there are too many variables. What is possible to quantify, and more relevant to fish and aquatic organisms, is the amount of sediment currently impacting aquatic habitat, regardless of origin, surveys by ODFW and BLM did not document excessive sedimentation as a factor limiting aquatic habitat (Revised EA, pp. 3-23 and 3-30).

The EA quantified the amount of sediment the BLM expected to impact aquatic habitat from each project element from multiple sources as listed:

“...it is anticipated that small amounts of disturbed soil would remain in and adjacent to the channel in the vicinity of the crossing. Estimates based on observations of similar projects suggest that direct sediment contributions to the channel resulting from the culvert work would be less than 1 cubic foot of sediment at the crossing (USDI, 2010)...” (Revised EA, p. 3-32).

“The anticipated effect to aquatic habitat as a result of the road decommissioning would be the addition of less than 1 cubic foot of unconsolidated fill material (sediment) to Cottonwood Creek, and less than 2 cubic feet to the unnamed tributary to Hyatt Lake...” (Revised EA, p. 3-33).

“The magnitude of the dust/sediment inputs would be small because dry/frozen season haul restrictions would reduce impacts to the road surfaces, and haul routes would be spread over a relatively large spatial scale. It is not anticipated that the amount of sediment input into aquatic habitats resulting from use of the haul routes would be discernable above contributions which occur chronically. As such, the amount of dust (sediment) to reach and settle out in any one pool would be insufficient to adversely modify aquatic habitats.” (Revised EA, p. 3-34).

Comment 31: We believe that the significant cumulative impacts on forest ecosystems from past road construction, federal logging, and the ongoing cumulative impacts from grazing allotments and adjacent private lands logging may require the completion of an EIS for the proposed timber sale in conjunction with the Wildgal Dixie, Plateau Thin, Cold Onion, Howard Prairie and Sampson Cove timber sales. The cumulative impacts of the extensive OHV trail network on spotted owls, soil resources and hydrological health is largely ignored.

Response: CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions. This is because the current condition of the lands affected by the proposed action is the result from a multitude of natural processes and human actions that have taken place over many decades. A description of the current state of the environment as described under the affected environment section for each resource, inherently includes the aggregate effects of past actions. The importance of “past actions” is to set the context for understanding the incremental effects of

the proposed action. This context is determined by combining the current conditions with available information on the expected effects of other present and reasonably foreseeable future actions. The analysis of cumulative effects conducted for the Cottonwood Forest Management EA has adequately accounted for past, ongoing and reasonably foreseeable actions.

The analysis area for cumulative effects varies by resource and include those areas that could potentially be affected by the proposed action. In some cases the analysis area is confined to the project area (project units and roads) and in others the analysis area extends beyond the project area. Therefore, how each resource analysis considered and addressed the projects you list above will vary also. Each resource section described the analysis area used for the analysis of effects.

Regarding the cumulative impacts of the OHV trail network on spotted owls, soil resources and hydrological health, the aerial photo interpretation conducted to quantify past harvest and non-GTRN roads is the method by which OHV trails are incorporated into the broader analysis, and are factored into descriptions of the existing environment, such as road densities, area of compacted ground, etc. The analysis may miss some trails in heavily forested areas, but is the most cost-effective and efficient tool we have for estimating the extent of OHV trails across large analysis areas.

The analysis area for Water Resources is defined by the direction contained within Appendix U, Cumulative Effects Analysis for Small Watersheds of Concern (PRMP/EIS Vol. II, Oct. 1994, p. 173) and the Medford District Resource Management Plan (RMP/ ROD, 1995, p.153). The scale of analysis for Water Resources and the rationale supporting it are disclosed in the EA (Revised EA, pp. 3-12 to 3-14).

The fish/aquatic habitat analysis area was defined by where any effects resulting from the timber sale may reasonably be expected to be discernable, and this is discussed in the intro (Revised EA, p. 3-22):

“For the fisheries analysis, areas will be discussed by major catchment, defined by areas that drain to distinct fish bearing streams. In the Cottonwood Project, these catchments consist of Keene Creek and its tributaries above Keene Creek Reservoir, including Cottonwood Creek, which flows into Hyatt Lake, and Burnt Creek, a Keene Creek tributary above Little Hyatt Lake. Henceforth, this area will be referred to as the analysis area.”

The Wildgal Dixie, Plateau Thin, Cold Onion, Howard Prairie and Sampson Cove timber sales are outside the analysis area used for effects to wildlife for the Cottonwood Forest Management Project. For the purpose of analyzing the affected environment and the proposed project with regard to terrestrial wildlife, the analysis area considers four HUC 7s (also referred to as 7th field hydrologic units or subwatersheds). Because the proposed treatments are designed to maintain the functional condition of forest habitat for northern spotted owls and fishers, the extent of effects from these treatments is not expected to extend beyond the 7th field hydrologic units (subwatersheds) as previously defined.

Comment 32: BLM refuses to disclose the function and condition of the three surrounding LSRs claiming that Late-successional Reserves are not being logged. However, the agency repeatedly relies on the reserve network as a hedge against project impacts and effects. “[T]he agency’s assumption that reserves are not being logged is in fact wrong- a cursory review of recent BLM timber sale will reveal a number of timber sales located in both LSRs and riparian reserves.”

Response: As stated in the EA, no harvest activities are planned in any of the three nearby Late-successional Reserves as designated under BLMs 1995 RMP and the Northwest Forest Plan (Revised EA, p. 1-10). Because the Cottonwood Forest Management Project would not affect any of these nearby reserves they are not addressed in the affected environment or effects analysis.

Comment 33: “BLM contends that it need not analyze the economic benefits of unlogged forest ecosystems because “about 30% of BLM-administered lands on the Medford District are allocated to timber resource management. First of all, that figure is patently incorrect. Under the 2008 ROD a much higher percentage of lands are allocated to timber production. Lastly, if the BLM wishes to avoid analysis of the economic benefits of unlogged forest stands by contending that a reserve network exists, then it must disclose the existing cumulative effects to, and efficacy of, that reserve network to providing for the wildlife and hydrological values that will be harmed by project implementation.”

Response: As stated in the EA “Commenters suggested that no logging provides a greater economic benefit to communities than logging.” The point of the rationale for eliminating this issue from detailed analysis is that the allocation of lands to timber production occurs during the land use planning process (Revised EA, p. 1-10). The appropriate scale and timing for conducting a cost benefit analysis for timber harvest versus no timber harvest is during the land use planning process. A decision as to whether or not to allocate the Cottonwood Project Area to lands to be managed for the purpose of timber production has been made. The issue raised above is beyond the scope of analysis during site specific project planning. The Cottonwood Forest Management Project is implementing the objectives identified for lands allocated for the purpose of long-term sustainable timber production (Revised EA, p. 1-3).

Comment 34: “the EA completely avoids discussion of the purpose, function and efficacy of either the 1992 or ... 2008 Northern Spotted Owl critical habitat unit that overlays much of the project area.”

“While page 3-47 of the EA discloses that the BLM intends to log 135 acres of habitat located in 2008 designated NSO critical habitat, the EA contains no analysis of the impacts of logging (yarding and hauling) activities on this critical habitat unit. Indeed, the name and purpose of the critical habitat unit are not even hinted at in the EA. The purpose and status of the CHU, and the impact of logging on its efficacy, are also not disclosed or analyzed by the BLM.

When US Fish and Wildlife Service designated the area as ‘critical habitat’ for Northern Spotted Owls in 1993 they wrote that the Jenny Creek area:

provides the single most important ‘stepping stone’ of critical habitat which links the Oregon Cascades to the Klamath Mountains province across the South Ashland portion of the I-5 area of concern.

The impacts of logging, snag removal, mistletoe logging, ground-based yarding and new road construction on the efficacy of this critical ‘stepping stone’ are simply absent from the EA.”

Response: The harvest activities planned for the 135 acres within the 2008 designated northern spotted owl critical habitat will retain the primary constituent elements of critical habitat. As stated in the July 2010 NLAA BA in which this project was submitted for consultation with the USFWS: “No primary constituent elements will be reduced in quantity or quality.”

- There will be no change in the amount of spotted owl NRF or dispersal habitat in the three affected 2008 CHUs.
- Canopy cover within treated stands of spotted owl NRF habitat will be retained at 60 percent or greater, allowing for the continued nesting, roosting and foraging of spotted owls within treated stands.
- Canopy cover within treated stands of spotted owl dispersal will be retained at 40 percent or greater, allowing birds to disperse through the area, and occasionally feed.

- Decadent woody material in the treatment areas, such as large snags and down wood, will remain post-treatment, providing habitat for spotted owl prey species.
- Multi-canopy, uneven-aged tree structure present prior to treatments will remain post-treatment, providing important habitat features of spotted owl NRF habitat.
- Post treatment structural conditions will maintain habitat conditions for spotted owl prey species, particularly woodrats, in treatment areas.
- Spacing treatments among reserved areas and leaving multiple canopies, assorted tree sizes and horizontal/vertical canopies within the treatment area will reduce potential adverse effects to flying squirrels, a secondary prey species in the area.
- No spotted owl nest trees will be removed; with the exception of the Howard Junction owl site, no nest patches would be treated. In the Howard Junction site, the treatment in dispersal is designed to protect the NRF patches from fire, and make the entire home range more functional over the long term. No adverse impact to areas currently used by owls is expected in this case.
- Mistletoe will be removed in areas where it threatens the survival of affected trees.
- Treatments will be distributed both spatially and temporally within the affected CHUs .

Anticipated beneficial effects which may result from the implementation of thinning and fuels reduction treatments include:

- Improved ecological condition of treated stands;
- Residual trees will be more resilient to loss from suppression mortality;
- Residual trees will gain girth, height and thicker bark, improving resistance to fire;
- Reduced risk of stand loss due to wildland fires;
- Post-treatment stands would retain components important to spotted owls and would rapidly continue towards improved late-seral development over time;
- Increase in the amount of forage plants important to spotted owl prey species; and
- Improve growth (height and girth) over time post-harvest to create better flying squirrel habitat (an important prey species), while concurrently reducing potential adverse effects to prey species.

Comment 35: It appears that some of the new road construction is proposed within stands protected as a Great Grey Owl survey and manage buffer. Why is this issue not disclosed and analyzed in the EA?

Response: All great grey owl sites have been provided a ¼ mile buffer or equivalent area polygon (about 100 acres) in accordance with Survey and Manage requirements. A map of great grey owl sites has been added to the Revised EA (Revised EA, p. 3-53, Map 3-5).

Comment 36: “The contention in the EA that the project does not violate the ACS is incorrect.

Timber haul will inhibit attainment of ACS objectives. Tractor yarding will inhibit attainment of ACS objectives. Road construction will inhibit attainment of ACS objectives. Canopy removal will inhibit attainment of ACS objectives. Constructing a logging road through a riparian reserve and across a waterbody will inhibit attainment of ACS objectives.

Response: Yarding would have no mechanism to impact any ACS objectives, as it would not occur in Riparian Reserves or have connectivity with channels. Canopy removal would not impact any objectives as remaining canopy cover would be sufficient to preclude any increases in peak flows (see hydro analysis in EA Chapter 3). Timber haul and road construction would impact several objectives at the site level, which is stated in the analysis (Revised EA, p. 3-38).

“[T]he ‘ACS analysis’ contained in the EA (at 3-37 through 3-39) explicitly acknowledges that sediment from timber sale and road construction activities will be detectable at the site level. Yet the BLM contends that adding yet more sediment to sediment-impaired waterbodies that are trending away from ACS compliance somehow complies with the ACS. The BLM needs to reduce, rather than increase, sediment loading in the planning area.

Response: Under BLMs 1995 RMP, the ACS requires that projects “not retard or prevent the attainment of Aquatic Conservation Strategy objectives.” It does not require that improvements be made with every project implemented. Also, “evidence . . . that a project will result in some degradation does not, standing alone, constitute ACS noncompliance” *Bark v. BLM*, 643 F. Supp. 2d 1214, 1234-1235 (D. Or. 2009). While the EA acknowledges that project or site level effects are anticipated, the EA details how the Aquatic Conservation Strategy Objectives would be maintained at broader scales (Revised EA, pp. 3-37 to 3-39). For the same reasons the court found in BLM’s favor in *BARK*, the effects of this project meet the requirements of ACS, and your EA comment does not show how BLM’s conclusions on this issue are in error. The Cottonwood Forest Management Project would also reduce sediment loading in the planning area through the decommissioning of riparian roads.

ACSO 1 “page 3-17 of the EA acknowledges that 3 out of 4 subwatersheds in the planning area are currently over the 25% harvested threshold for elevated risk of peak flows. Yet the BLM proposes additional logging and roading activities throughout the planning area. The ACS analysis is silent on this point.”

Response: ACSO #1 states: “*Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted*”. Landscape scale features which could be impacted by the Cottonwood Forest Management Project are a reduction in vegetation and an increase in compaction. Based on analysis it was determined hydrological processes would be maintained, “*given the small amount of compacted area and no increases in canopy cover less than 30 percent ... beyond existing, there is little probability the proposal would modify the magnitude or timing of peak or base flows*” (Revised EA, p. 3-21).

ACSO 2 requires that the BLM “maintain and restore spatial and temporal connectivity within and between watersheds.” Yet the BLM is proposing road construction through and across designated riparian reserves.

Response: While the proposal does include road construction through and across designated riparian reserves, it also includes proposals to decommission riparian roads and remove crossings. The ACS analysis states:

“The road decommissioning proposed in the project would help this indicator at the site level and drainage level, as 3 road/stream crossings would be restored. The new road construction would not affect this indicator in the long term, as the proposed crossing would be temporary, and would be removed after harvest operations were complete. None of the above crossings are over fish habitat. No appreciable benefit would be noticeable at the watershed scale, as this indicator would continue to be significantly impacted by the dams.” (Revised EA, pp. 3-37 to 3-38).

ACSO 3 “Page 3-38 of the EA acknowledges that “[t]he installation and removal of the temporary crossing for the proposed new road would have short term adverse impacts at the site level at the temporary crossing.” The BLM then immediately discounts these

impacts as limited in scope and time. In fact, the removal of streamside vegetation, the compaction of soils in the riparian reserve, and the alteration of the stream-bank constitute significant and long-term negative impacts to this ACS objective.”

Response: True, vegetation will remain removed, soils compacted, and the stream bank/bottom will be different than it is now. This disturbance would be limited to the road prism, or ~ 30 linear feet of an intermittent stream. This limited disturbance would not compromise the physical integrity of the aquatic system, which is what ACSO # 3 relates to.

ACSO 4 “The BLM’s ACS analysis at 3-38 acknowledges that “there would likely be a small amount of fine sediment entering stream channels” due to “proposed new road construction, road decommissioning and haul.” ... The agency is not permitted to continue increasing sediment loading to an already degraded system just because the impacts are minor compared to the existing condition.”

Response: Excessive sedimentation has not been found to be adversely impacting fish habitat in the analysis area (Revised EA, pp. 3-23 and 3-30). As discussed in the EA, small amounts of fine sediment would likely be input into aquatic habitat as a result of the timber sale, but the introduction of this sediment would be in such a manner as to not meaningfully adversely affect aquatic organisms. Road decommissioning would reduce chronic sources of sediment over time (Revised EA, p. 3-34).

Addition of small site level inputs does not necessarily constitute non-compliance with ACS objectives; Under BLMs 1995 RMP, the ACS requires that projects “not retard or prevent the attainment of Aquatic Conservation Strategy objectives.” It does not require that improvements be made with every project implemented. Also, “evidence . . . that a project will result in some degradation does not, standing alone, constitute ACS noncompliance.” *Bark v. BLM*, 643 F. Supp. 2d 1214, 1234-1235 (D. Or. 2009).

ACSO 5 “As acknowledged on page 3-38 ...[t]here would be a noticeable increase in soil erosion the first few substantial rain events after [road] construction’ (Cottonwood EA page 3-10). Short-term erosion rate potential would increase moderately (15-50% over undisturbed rates) in the tractor units where slopes exceed 20% and where skid trails are not on the contour’ (Cottonwood EA page 3-11).”

Response: Increases in erosion rates are only meaningful to aquatic habitat if there is connectivity between disturbances and stream channels, such as in the tractor units or off the skid trails. Riparian Reserves are being implemented as part of the project design and they are effective in filtering mobilized eroded particulates. Furthermore, the major portion of the harvest area would remain essentially undisturbed, as logging disturbance rarely bares more than 30 percent of the soil surface (Revised EA, p. 3-11). These undisturbed areas within units (combined with implementation of project design features such as waterbarring skid trails, operating only during the dry season, maintaining coarse woody material) also help to filter sediment and prevent off-site movement of soil.

ACSO 6 “[A]s disclosed on page 3-17 of the EA the BLM is proposing to tractor log 3 subwatersheds that exceed the agency’s threshold for logging-related elevated risk of peak flows. That information is notably absent from the ACS analysis found on page 3-39 of the EA. Further, the ACS analysis makes no mention of the impacts of water drafting, ground-based yarding and increasing OHV use on peak flows in the planning area.

Response: ACSO # 6 reads as follows: “*Maintain and restore instream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.*” No project elements in the Cottonwood timber sale would have any likelihood of measurably impacting in-stream flows, as disclosed in the hydro analysis (Revised EA, pp. 3-20 to 3-22, and 3-39). Any water used for dust abatement would be purchased from Talent Irrigation District and withdrawn from an existing reservoir. Since no water would be drafted from project area streams, there would be no-effect to instream flows.

ACSO 7 “BLM is proposing new road construction through wet meadow habitat. Here, as in the roads section of the EA, the BLM makes no attempt to analyze or disclose the actual impacts of road construction on the hydrological functioning of the wet meadow.”

Response: ACSO7 reads as follows: “*Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.*” As mentioned, the road would intersect the intermittent channel and meadow (stream adjacent grass land) at a right angle, minimizing the disturbance to the extent possible. Regarding the hydrological functioning, the parameter that would be impacted is sediment in the stream channel, which is discussed at length in both the EA and the ACS. The timing, variability, and duration of floodplain inundation of the meadow (which is perched above the intermittent channel) would not be impacted. The meadow is not naturally inundated by water, save when it is covered by snow.

ACSO 8 “The Cottonwood project would directly inhibit attainment of this objective by removing vegetation within riparian reserves to facilitate new logging road construction.”

Response: While it is true that, at the site level, ~ 0.2 miles of riparian vegetation would be disturbed, this does not necessarily constitute ACS non-compliance. The road decommissioning would allow for the restoration of ~ 3 acres of riparian vegetation, or a net benefit of 2.8 acres.

ACSO 9 “Page 3-39 of the EA does not even attempt to quantify the impacts of proposed riparian road construction on these aquatic values...[a]s established in the cumulative impacts section of this document, the existing and proposed impacts to native plant, invertebrate and vertebrate-dependent species is clearly significant. Please see page 3-27 of the EA regarding the precipitous decline of Jenny Creek Redband trout as one example.”

Response xx. The EA documents the current conditions of aquatic habitat in the analysis area resulting from past actions (Revised EA, pp. 3-28 to 3-30) as well as the potential effects from the Cottonwood Forest Management Project. The primary concern for effects to aquatic resources would be from road construction and road decommissioning, and to a lesser degree log hauling. Effects would occur at the site scale in the form of minor sedimentation (Revised EA, pp. 3-31 to 3-34); road decommissioning would have long-term benefits by reducing a chronic source of sediment and by allowing the riparian area to revegetate. Adherence to required Project Design Features would ensure sedimentation is minimized (Revised EA, pp. 2-14 to 2-18). Any sedimentation (< 2 cubic feet) would occur in short duration pulses and would not impact aquatic habitat over the long-term (Revised EA, pp. 3-31 to 3-34). Also refer to responses to ACS Objectives 1 through 8 above.

Comment 37: Please ... note that the WQRP (page 23) relies upon the assumption that:

As a general rule, the Standards and Guidelines for Riparian Reserves prohibit or regulate activities in Riparian Reserves that retard or prevent attainment of the ACS objectives.

Hence proposed activities (such as road construction through a riparian reserve) that retard attainment of ACS objectives may also run afoul of the BLM’s Clean Water Act obligations identified in the Jenny Creek WQRP.”

Response: The Jenny Creek WQRP was prepared to specifically address temperature issues associated with 303(d) listing under the Clean Water Act. Although there will be several trees removed within the Riparian Reserve as a result of road construction, they are a considerable distance from stream and the stream where the crossing would occur is a long duration intermittent and is dry during the summer months. Stream temperature will therefore not be affected (Revised EA, p. 3-31).

The BLM will comply with the Clean Water Act to the extent required. Through the use of Best Management Practices (BMPs) and Project Design Features (PDFs), the Cottonwood Forest Management Project will minimize sediment delivery to streams to the maximum extent practicable.

Comment 38: No attempt is made to quantify or qualify the impacts of proposed mistletoe logging on NSO or their prey.

Response: Given that mistletoe removal will occur only occasionally throughout this project, the overall effects of such removal are anticipated to be small (Revised EA, p. 3-47). See also comment below regarding prevalence of mistletoe across the landscape.

Comment 39: Bare minimum canopy levels (60 percent for NRF, 40 percent for dispersal) don’t take into account group selection openings and target canopy levels may not be maintained as claimed in the EA.

Response: Canopy closure is not the only metric by which NRF habitat is defined. Small openings are a part of the natural landscape in the western Oregon Cascades. Small patches, such as those that might be created in small group selection or pine release, can be areas of good prey availability and potentially increased vulnerability (i.e., better hunting for owls) (Zabel 1995). Prey animals may be more exposed in the disturbed area or may move away from the disturbed area for the short-term. Some minor changes in prey availability may occur as cover is disturbed and animals move around in the understory. They may become more vulnerable and exposed. The disturbance might attract other predators such as hawks, other owls, and mammalian predators. This may increase competition for owls in the treatment area, but the exposure of prey may also improve prey availability for northern spotted owls (Revised EA, p. 3-48).

Comment 40: “[P]age 30 of the Wildgal Dixie EA reveals that:

The 2008 Southern Oregon Cascades annual report also suggests that the number of spotted owl sites occupied is declining. The number of sites occupied for those sites surveyed was below 50% for the first time since the surveys began. Occupancy, nesting, productivity and the total number of known identity owls in 2008 was the lowest ever recorded for the Southern Oregon Cascades Study Area (Anthony et al 2009, unpublished report).

This information is completely absent from the Cottonwood EA in which the BLM has elected to paint a much rosier (if inaccurate) picture of NSO population dynamics in the Southern Oregon Cascades.”

Response: As noted in the EA (Revised EA, p. 3-42): “An updated draft meta-analysis (<http://www.reo.gov/monitoring/reports/nso> Population Demography Of Northern Spotted Owls, Forsman, et al.) is projected to be published in July 2011. The conclusions reached in this draft are

similar to those found in Anthony et al. Forsman, et al, 2011 detected a decline but lacked statistical precision to determine if it was real or an artifact of sampling.”

Comment 41: Please note that the Cottonwood and Sampson Cove timber sales are located within NSO home ranges that appear to overlap both planning areas. The BLM has failed to provide a substantive, quantitative analysis of the impacts of its past, present and foreseeable actions (including implementation of the 2008 WOPR ROD) on these home ranges, the surrounding LSR network, and NSO critical habitat.

Response: All treatments within the Cottonwood project and all treatments within the home range of northern spotted owls within the Sampson Cove project will be “treat and maintain”—i.e. NSO habitat treated will remain functional as NSO habitat post treatment. Through the implementation of seasonal restriction as required in the PDFs for these projects disturbance of known NSO sites will be avoided during the breeding season.

The analysis of effects included in the EA takes into account past, present, and reasonably foreseeable actions. The reinstatement of the 2008 Medford District Record of Decision and Resource Management Plan in and of itself does not constitute a reasonably foreseeable action. An action on BLM-administered lands in the analysis area becomes reasonable foreseeable at the time a formal proposal is made in response to an identified purpose and need. Generally this occurs when formal public scoping is initiated. No projects have been proposed in the Cottonwood Analysis Area beyond those already discussed in the Cottonwood Forest Management Project EA.

Comment 42: “[D]espite repeated acknowledgements in the EA that OHV use is an existing and increasing problem in the planning area, the BLM (at page 3-49) relies upon the efficacy of a project design feature to limit noise disturbance to nesting owls that will do nothing to reduce or mitigate the impacts of OHV noise during the nesting and rearing season.

Response: PDFs are designed to reduce effects of BLMs actions on NSOs (and other species as noted). OHV use is not a BLM initiated activity and are beyond the scope of this NEPA document.

Comment 43: The EA (page 3-47) “ indicates that “[a]lternative 2 would treat and maintain 456 acres of suitable spotted owl habitat and 652 acres of dispersal habitat,” while page 3-47 also indicates that “[t]here are approximately 2,752 acres of suitable spotted owl habitat, and 634 acres of dispersal-only habitat on BLM ownership in the analysis area.” How exactly is it that the BLM intends to treat and maintain more acres of dispersal habitat than actually exist in the planning area?”

Response: The correct figures for the current habitat condition in the Cottonwood area are: 652 acres of dispersal and 2734 acres of NRF.

Comment 44: The Cottonwood EA contains no qualitative information regarding Barred Owls.

Response: Surveys have not been conducted specifically to locate barred owls. No barred owls have been located during northern spotted owl surveys or great gray owl surveys.

Comment 45: “[T]he land bird “analysis” section contains no actual quantitative or qualitative information about population dynamics, reproductive success, nesting locations, or project impacts on land birds and neotropical species. Our November 2010 scoping comments regarding this project specifically requested that the BLM “please be explicit in the forthcoming NEPA documentation about the management, and population dynamics, of rare bird species in this project.”

Response: As noted in the EA, the appropriate scale for land bird analysis is at the eco-regional scale (Revised EA, p.3-56). Additionally, seasonal restrictions listed as Project Design Features for other resources would protect nesting birds for the majority of the nesting period.

Comment 46: The contention on page 3-50 of the EA that “no known denning sites would be impacted” fails to disclose if the BLM has in fact looked for denning sites and if so, if any were located.

Response: Surveys for fisher denning sites have not been conducted. Fishers den in large down logs or large, standing, hollow trees. Neither of these habitat features are targeted for removal or modification under the proposed treatments. Additionally, seasonal restrictions listed as Project Design Features for other resources would reduce the likelihood of impact to fishers by restricting project activities until young are approximately six weeks old, about the age when fisher move young from natal dens and become more mobile (Revised EA, p. 3-51).

Comment 47: “The number, location and type of nonnative species present at the site (of the road construction across the meadow) are ... not analyzed. The direct potential for the new road to contribute to observed soil disturbance and spread of nonnative species on the site are not disclosed.”

Response: Introduced, or non-native, plant species within the Cottonwood analysis area are addressed in the EA (Revised EA, pp. 3-97-105). Frequency (Revised EA, Table 3-24) of all documented non-native species was calculated using comprehensive unit species lists (as provided by botanical surveyors). While surveyors, per contract stipulations and Medford District Weed policy, are required to provide these lists for comprehensive survey areas, they are required to map only those species listed by the Oregon Department of Agriculture (ODA) as Category A or Target (T) Noxious Weed Species. The Medford District Integrated Weed Management Plan (IWMP) and EA specifically states:

“[t]he underlying objective of the Medford District Noxious Weed Program is to eliminate or eradicate outlying populations of Target and “A” listed weeds when and where possible, and to reduce the number of infestations in the remaining area to a lower level, which can be accepted or tolerated by management.” (IWMP p. 2)

Per the Cottonwood EA,

“Project Design Features as described in Chapter 2 are incorporated into the Proposed Action to minimize the spread of noxious weeds and non-native plant species. Noxious weeds would not be spread as a direct result of executing the Proposed Action with the implementation of the Project Design Features. However, weed seed can be transported into the analysis area by human actions not associated with the project and also by wind, water, and animals.” (Revised EA, p. 3-102).

There are no documented Category A, B or T weed sites within the area proposed for road building in this area. Per EA p. 3-103, *“[t]here is no budget to treat Class C weeds; also, it is not permitted to use herbicides on Class C weeds.”* Additionally, implementation of PDFs, as well as the redesign of the road crossing “...would further reduce the potential for effects on SSP from sediment deposits during high water events, nonnative species introductions, and potential OHV activity” (Revised EA, pp. 3-94 to 3-95).

Multiple visits to areas of proposed road building and soil-disturbing activities were conducted by a BLM Botanist with the intent to mitigate for and best protect botanical resources, per the Medford District RMP. Professional judgment was utilized with regard to site species composition, current site conditions,

prior disturbance, and potential future impacts. With regard to the proposed road in section T39S R02E S17/20, the EA states:

“To reduce the impacts on known SSP populations and adjacent suitable SSP habitat, the redesigned crossing passes through a portion of the meadow where prior soil disturbance is evidenced by the presence of nonnative species and visible signs of cattle use. This redirection of the road, with the implementation of PDFs, will further reduce effects on SSP related to potential sediment deposits during high water events, nonnative species introductions, and potential illicit OHV activity. The redirection of the road also accounts for the diminishing size of the meadow due to conifer encroachment, and every effort was made by the Botanist to direct the road through areas where the removal of conifers would, over time, benefit meadow plant species. Monitoring in this area will be implemented for the 5 years following completion of the Cottonwood Forest Management Project.” (Revised EA, p. 3-94)

While the area in question is weed free, the EA Weed Risk Assessment also clearly states that noxious weeds would not be spread as a direct result of executing the Proposed Action with the implementation of PDFs.

“Project Design Features as described in Chapter 2 are incorporated into the Proposed Action to minimize the spread of noxious weeds and nonnative plant species. Noxious weeds would not be spread as a direct result of executing the Proposed Action with the implementation of the Project Design Features. However, weed seed can be transported into the analysis area by human actions not associated with the project and also by wind, water, and animals.” (Revised EA, p. 3-102).

Comment 48: “The agency contends that new road construction will not impact botanical resources via increased OHV use because ‘proper implementation of PDFs’ will result in ‘no increase in unauthorized use’. ...[T]he BLM knows that its closure and blocking of temporary roads (and gating of new permanent roads) has proven completely ineffective at stopping or slowing OHV use of these features.”

Response: The issue for potentially increasing OHV access and associated effects to botanical resources was identified in the EA (p. 3-94). As stated in the EA:

“[c]losure of the road after project activity is complete is intended to prevent the area in and around the site from potential OHV use that can arise with the creation of new road systems on public and private lands. However, prior observations across the Medford District have indicated that barriers (i.e., ditches and berms, fallen logs, boulders, visual barriers), gates and partial obliteration do not always prevent unauthorized land use and travel once a new road is constructed. To reduce the likelihood of unauthorized use, road construction and road closure would occur the same season of use. Installing a temporary crossing through an ephemeral streambed increases the risk of sedimentation to be deposited downstream, putting the known SSP at risk. To reduce the likelihood of impacts due to the building of a road crossing, the proposed road was redesigned under advisement of BLM’s botanist to allow for the greatest distance possible between the known SSP population and the proposed crossing to protect the known population.

The redesigned crossing passes through a portion of the meadow where conifer encroachment is reducing the size of the meadow and in an area of prior soil disturbance is evidenced by the presence nonnative species and visible signs of cattle use. The removal of some of the conifer encroachment into the meadow would, over time, benefit meadow plant species. The redesign of

the road combined with the implementation of PDFs, would further reduce the potential for effects on SSP from sediment deposits during high water events, nonnative species introductions, and potential OHV activity. Monitoring in this area will be implemented for the 5 years following completion of the Cottonwood Forest Management Project.”

Comment 49: The BLM’s analysis of mistletoe fails to convey any quantitative or qualitative information whatsoever.

Response: Silvicultural prescriptions are designed to address the desired conditions at the stand level. Collecting data or information on the presence of every tree in a stand that has a sign or symptom of mistletoe disease would not be a practical nor would it lead to a better decision concerning the management of mistletoe within stands. Information regarding the amount and location of mistletoe trees that will be marked for “cut” does not become available until after the analysis is completed and the stands are marked and cruised.

Comment 50: “Ironically, logging practices often contribute to the spread of dwarf mistletoe. When soils are disturbed and ground cover is removed during logging operations, stand densities increase because pine seedlings readily germinate and grow on bare mineral soil. Such disturbances are particularly prevalent when heavy machinery is used to remove trees.

“Logging may increase mistletoe in the remnant stand, rather than decrease it. Many mistletoe seeds that infect host trees do not readily produce aerial shoots; these are known as "latent infections" (Knutson and Tinnin 1980). After thinning, 90 percent of all latent infections will appear within five years (Shea 1964).”

Response: In stands where Douglas-fir dwarf mistletoe (*Arceuthobium douglasii*) is present, silvicultural treatments are designed to slow the spread of the infection, rather than eradicate the parasite. These stand level treatments aim to strategically retain trees that have the least likelihood of contracting the disease and remove the trees that might have “latent infections”, due to their proximity of trees with visual symptoms. These stand level prescriptions promote the removal of the most severely infected trees and selects trees to remove that are least likely to create a greater sunlight environment around the least infected tree crowns. Silviculture objectives desired from treatment include the retention trees that create diversified stand structure (height, age, and diameter classes) and species composition, so the eradication of the parasite is not desired. It is true that logging may increase the size of mistletoe brooms in trees that are currently infected; however, these silvicultural treatments aim to reduce the likelihood of the parasite to spread from “tree to tree” without compromising the required canopy cover needed for wildlife habitat. Trees that have mistletoe infection may provide a benefit to wildlife in these stands that are lacking nesting platforms and large snags. The spread of western dwarf mistletoe (*A. campylopodum*) or the species that affects ponderosa pine is not targeted for removal in this project. Rather, the increase in pine seedlings would pose a benefit to stand diversity and allow for regeneration of drought tolerant species that are otherwise decreasing in numbers in the project area and resistant to the Douglas-fir dwarf mistletoe disease.

Comment 51: We are particularly concerned that the EA for the Cottonwood project fails to rigorously analyze or even mention the potential impacts of the proposed action on the monument’s Objects of Interest.

- **Relatively intact and undisturbed ‘foothills to plateau’ transition zone that extends from white oak-grassland plant communities in lower Sampson Creek up to montane conifer forests. These ecological transition zones are known to support a high diversity of plant and animal species, some of which are now rare in and around the monument. Increased**

protection here would greatly enhance the resilience of the monument's biological Objects of Interest to climate change.

- **Protection of the Cottonwood area would also contribute to maintaining the hydrologic function and integrity of the Keene Creek watershed, which flows into the monument and represents a known hotspot of aquatic biodiversity.**
- **The late-successional forests of the Cottonwood project area currently provide habitat connectivity between the CSNM and blocks of suitable habitat to the north for wide-ranging forest-dependent species such as the Pacific Fisher and Northern Spotted Owl. Maintaining these landscape-scale connections is critical to the monument's long-term ecological integrity and will assist movements of the native biota in response to continuing loss of closed canopy forest habitat on adjacent private lands.**

Response: You have not provided BLM sufficient detail concerning how you believe the Cottonwood Forest Management Project would specifically harm the objects of interest within the Cascade Siskiyou National Monument. The Cottonwood Forest Management Project is not located within the Cascade Siskiyou National Monument and the BLMs interdisciplinary team of resource specialists conducted an Environmental Analysis of effects that may occur as a result of implementing the Cottonwood Forest Management Project. The Cottonwood Forest Management Project would not impair the hydrologic function of the Keene Creek Watershed, *“given the small amount of compacted area and no increases in canopy cover less than 30 percent (Table 3-4) beyond existing, there is little probability the proposal would modify the magnitude or timing of peak or base flows”* (Revised EA, p. 3-21). Silvicultural descriptions are designed to maintain the current function of existing spotted owl nesting, roosting, foraging, and dispersal habitat within the Cottonwood project units (representing 17 percent of the habitat within the analysis area), and 83 percent of the existing northern spotted owl nesting roosting and foraging habitat within the analysis area would remain untreated (Revised EA, p. 3-47). Therefore, forest stands within the Cottonwood Forest Management Project and analysis area would continue to function at their current capacity for providing for landscape-scale habitat connectivity.

Comment 52: Even if the large trees are not marked with blue paint as "harvestable", there is no way to prevent someone cutting it and painting the stump afterward to confuse monitors.

Response: BLMs tree marking paint has a specific tracer contained in it. The tracer is used to track trees identified for removal by the BLM. It cannot be obtained by the general public, making it very difficult for anyone to mark additional trees for harvest without detection. We also have a record of all trees marked by species, diameter and unit. BLM contract administrators and inspectors monitor the operations of contractors to ensure that contract specifications are implemented as designed. If work is not being implemented according to contract specifications, contractors are ordered to correct any deficiencies and may be ordered to stop work until contract violations are corrected. If the BLM discovers that additional trees have been marked by unauthorized personnel restitution would be of a monetary value of up to triple the amount of damage. The intentional theft of trees would be handled through Federal criminal charges and may be brought to court.

Comment 53: For the roads to be decommissioned, the EA does not include a detailed discussion of the actions to be taken or how these are likely to succeed.

Response: The EA was revised, including the proposed action description, to describe and display road decommissioning (Revised EA, pp. 2-4, 2-6, and 2-7). Each resource specialist addressed road decommissioning in their resource analysis.

Comment 54: Fuel reduction assumption. As the EA admits, the logging treatments will increase fine surface fuels, which the EA says “dictate fire intensity” [3-84], by 3-11 tons per acre. This creates a substantially increased surface fuel loading that the EA admits would increase flame lengths by a factor of four. Clearly, the logging alone would have the opposite effect than the EA describes and this is not disputed by BLM.

Response: The potential for the Cottonwood Timber Sale to increase fire hazard for the short-term was analyzed and adequately disclosed in the Cottonwood Forest Management Project EA (Revised EA, p. 3-82). BLM’s fire/fuels specialist estimated, and presented in the EA, that there would be a short-term increase in fuel loadings from harvest slash. This increase in fuel loading does not necessarily create a significant increase in the risk of large-scale wildfires for the short-term. This is because:

- slash piling is required soon after yarding is completed on a unit by unit basis, which breaks up the continuity of the fuel bed and its ability to carry fire;
- slash is green when first cut and gradually becomes more susceptible to burning;
- green fuels can dampen fire behavior and handpiles usually need to cure for 4-6 months before they will burn;
- Omi and Martinson (2002) suggest that the reduction in crown fuels outweigh any increases in surface fuels (Revised EA, p. 3-82).

As described in the EA, the BLM would administer contracts to complete post-harvest fuels treatments within 6 months to 2 years following completion of harvest activities (Revised EA, p. 2-14). Following treatment of activity fuels, fire hazard would be lower than pre-harvest conditions due to the reduction in ladder and canopy fuels (Revised EA, pp. 3-82 to 3-83).

Comment 55: I feel that some of the units would impact local users PCT experience, such as unit (or part of) 30-2. Many local hikers access the PCT via 39-3E-32, and park at gate at 39-3E-30 now closed with berms (hopefully). Opening and harvesting this area would reverse this closure to ATV’s I feel. I especially want to prevent vehicle access on 39-3E-30, where they drive past the end, to the wonderful meadows and woods off the new PCT route.

Response: Unit 30-2 was observed from where people park to access the PCT, where roads 39-3E-32 and 39-3E-30 (gated and earthen bermed) intersect. PCTA regional representative (Ian Nelson) and the BLM outdoor recreation planner determined that this unit is not visible from the PCT itself, from the access point (undesignated) the landscapes topography and vegetation characteristics provided screening that would minimize any visual impact resulting from the project from this access point. Further, it was determined that the presence of the road in the foreground would attract the attention of the recreationist to a greater degree than any changes to vegetation characteristics resulting from the project, which would be minimal due to topography and screening.

Trees were marked for cutting in unit 30-1, which is close to road 39-3E-30 and the PCT at the time the BLM recreation planner and the PCTA regional representative visited this area. Marked trees were individually assessed to see how the loss of these trees would impact views from the PCT and affect OHV use in this area. It was determined that project prescriptions (limited number of trees marked for cutting) would not contribute to increased use of OHVs in this area. Additionally, an adjacent open area just north of road 39-3E-30 and south of unit 30-1 would likely be the vector for increased OHV activity potentially impacting the PCT-users’ experience. At this time, a fence and earthen berm are in place to try and stop OHV use on road 39-3E-30 and in this general area. The BLM is also blocking road 39-3E-30 with boulders in 2011-2012 in order to further limit OHV impacts to resources, including the PCT.

Comment 56: I object to the whole notion that VRM standards should be set to the “average recreationist” or “casual observer” driving by at 30 mph. The “dumbing down” of standards is insulting to the concept of setting standards emphasizing education and illumination of the visitor.

Response: BLM Manual Handbook (8431-1) provides that an individual completes contrast ratings from key observation point(s) using Bureau form 8400-4 (Visual Contrast Rating Worksheet). This/these contrast rating worksheets are intended to capture elements (form, line, color, texture) of the characteristic landscape before the project as compared to what effects the proposed project will have on the landscape after the project. BLM lands in the project area were previously inventoried and the 1995 RMP determined that lands in the Cottonwood Project fall into either VRM Class II or VRM Class III.

Class II Objective

The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III Objective

The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Some key observation points (KOPs) used for this project included views from roads, while others included views from the PCT. These KOPs were chosen because they represent points on the landscape that are likely seen the most by the greatest number of people, potentially having the greatest visual impact. The term “casual observer” is used throughout BLM Manual Handbook 8431-1 as a way of describing or defining these classes, and thus was chosen to describe whether the project would meet the VRM class objectives. VRM is not used as a tool to educate or illuminate visitors. The objective of VRM is to manage public land in a manner which will protect the quality of the scenic values of these lands (BLM Manual Handbook 8431-1).

Comment 57: Units of the Sampson Cove timber sale and the Cottonwood timber sale near the PCT are in close proximity and I feel that there would be a larger cumulative effect to the PCT with both sales back to back.

Response: Mitigation measures, project design features, no cut buffers, and the collaborative project that took place between the PCTA and the BLM regarding protections for the PCNST combine to result in a minimal effect to the PCNST from both projects. It is likely that after completion of both projects, a PCNST visitor would not notice a visible difference between landscapes in areas of these to sales and that of the landscape outside of these sales.