

Appendix K: Response to Comments on DEIS

Agencies have a responsibility under the National Environmental Policy Act (NEPA) to first “assess and consider comments both individually and collectively” and then to “respond...stating its response in the final statement.” The content analysis process, considered comments received “individually and collectively” and considered them equally, not weighting them by the number received or by organizational affiliation or by any other status of the respondent.

All letters, emails, faxes, and comment forms received as public comment on the Pilgrim DEIS were compiled, organized, read, and analyzed by the project planning team.

Comments were received from the Conservation Congress (CC), the American Forest Resource Council (AFRC), The Environmental Protection Information Center (EPIC), Siskiyou County Planning Department (SIS), Sierra Pacific Industries (SPI), The Winnemem Wintu Tribe (WW) and Mr. Steve Funk (SF). A letter was also received from the U.S. Department of Interior, Office of Environmental Policy and Compliance that offered no comments.

The following public concern statements are identified by respondent. Each public concern statement has been derived from one or several individual public comments.

Comment # 1: CC

The DEIS admits that cumulative effects analysis (CEA) is largely qualitative and admits quantitative data is missing. (DEIS P-31). Without actual hard data, the CEA is based largely on opinion and innuendo.

Response:

Quantitative data, based on field surveys and cited research is presented as appropriate for the affected resource. For example, see the discussion of direct and indirect effects of alternatives on snag counts on page 77 of the FEIS and supporting information in the analysis file. The FEIS provides a reasoned analysis of the available information and makes that information available to all concerned. As appropriate, the document also contains qualitative discussions of the impacts for all resources analyzed.

Comment # 2: CC

The DEIS geographically bounds cumulative effects differently for each resource. For example, some wildlife species impacts are bounded at the 5th field watershed scale, while timber harvest is bounded at the 8th field watershed scale. Why not bound the all cumulative effect at the same geographic scale?

Response:

The boundary of the cumulative effects analysis is usually not limited to the project area because environmental consequences vary by resource. In order to take a hard look at the cumulative impacts

of the proposed action and alternatives, the boundaries of different resource impacts are determined individually. For example, cumulative effects as related to spotted owls (page 57 of the FEIS) are bounded differently than cumulative effects for soils (page 91 of the FEIS). Cumulative effects boundaries are established by the extent and duration of the effects. Effects from the project in context with the effects of other projects must overlap in both time and space in order to be cumulative.

Comment # 3: CC

The DEIS seems inconsistent pages 49 and 50, 80% vs. 92% fuel model 10?

Response:

Page 49 of the DEIS is a discussion of the cumulative effects to fuel conditions by taking no action. Page 50 of the DEIS is a discussion of the direct and indirect effects to fuel conditions of implementing Alternative 1, the Proposed Action.

Comment # 4: CC & EPIC

Why didn't the DEIS analyze an alternative that replaces northern spotted owl habitat?

Response:

All action alternatives improve habitat conditions for northern spotted owl when compared to taking no action. FEIS page 59 “The greatest cumulative impact to the Northern Spotted Owl and its critical habitat ... is the continued loss of habitat from insect infestations and root disease...” Page 61 of the FEIS states that “Future stand conditions will increase and improve dispersal habitat in 5 to 15 years, as thinned plantations grow into suitable owl dispersal habitat and thinned natural stands recover canopy closure and trees increase in size.”

Comment # 5: CC

How did you determine that there would be no direct, indirect, or cumulative impacts to northern spotted owl?

Response:

The Biological Evaluation and Consultation with US Fish and Wildlife Service concluded that the Pilgrim project “may affect, but is not likely to adversely affect the northern spotted owl. Direct, indirect and cumulative impacts are discussed on pages 59-62 of the FEIS. Protocol surveys for the Northern Spotted Owl in the Pilgrim Project Area over the last three years have detected no owls. The project file includes the record of a conversation between Ron Clemenson of the US Fish and Wildlife Service, Red Bluff, CA, and Eric Forsman, Research Wildlife Biologist (noted expert on the Northern Spotted Owl), in which Mr. Forsman states that Northern Spotted Owls have never been found to use ponderosa pine types as nests, roosting or foraging habitat. The entire Pilgrim Project is ponderosa

pine type forest and is classified as “dispersal habitat.” The FEIS, page 61, does reflect some minor impacts to Northern Spotted Owls that may attempt to disperse through the project area.

Comment # 6: CC & EPIC

Were the 2004-05 and historic northern spotted owl surveys conducted to protocol?

Response:

Surveys for the Northern Spotted Owl were done to the protocol adopted by the U. S. Fish and Wildlife Service. Documentation of survey results is in the project file.

Comment # 7: CC

The DEIS, page 4 identifies 1.3 miles as the home range territory for northern spotted owl. What is the rationale for this standard?

Response:

The home range as based on extensive research on the Northern Spotted Owl and was adopted by the U.S. Fish and Wildlife Service after the NSO was listed as threatened under the Endangered Species Act.

Comment # 8: CC

The DEIS claims to have little effect on habitat for marten, pallid bats or goshawks. What is the rationale for this finding?

Response:

The description of the Affected Environment for Sensitive Wildlife and Fish, pages 63-64 of the FEIS, describes the project area as marginal for martens, pallid bats and goshawks due to the lack of riparian vegetation, limited perennial streams and naturally discontinuous canopy cover.

Protocol surveys for goshawks were completed in 2004, 2005 and 2006. No goshawks were found in the project area.

Surveys for martens in a broad area on the east side of Mt. Shasta, including the project area, completed in 2002 and 2003, confirm that American Marten are found above 4500 feet elevation and associated with true fir types and some perennial water source. This habitat type does not exist in the project area.

Pallid bats are insectivorous and their habitat in conifer forests is normally associated with wet meadows and perennial streams where insects are abundant. Pallid bats have never been observed in the project area, and habitat is very limited. See FEIS, page 64 and the Biological Evaluation, page 8.

Comment # 9: CC

The DEIS disclosure of impacts to mule deer is not based on population trend data so how can it find that populations are declining?

Response:

Deer population trends are disclosed in the Project Level Management Indicator Assemblages Report for the Pilgrim Vegetation Management Project, (Appendix L, page 32) and were derived from the most current information from the California Department of Fish and Game (Cited as a html in the report; *Long Term Trends in California's Deer Population, updated in 2005*).

Comment # 10: CC

Because there are less than 1.5 snags in 8000 acres of young plantations, the project violates Forest Plan standards and guidelines.

Response:

Most of the plantations being treated in this project are from brushfield conversions; few if any snags existed in these reforested areas at the time they were planted. The trees in the plantations are not large enough to meet the LRMP size requirements for snags. Reaching desired snag size can be achieved by thinning these overstocked plantations and accelerating tree growth, as proposed in this project. Where trees are large enough and snags exist, snag retention requirements will be met. See Design Criteria Common to All Action Alternatives “Retain, where feasible, an average of 2 or more snags per acre meeting the minimum requirements...” FEIS, page 23.

Comment # 11: CC

What is the rationale for determining a population of less than 50 white headed woodpeckers is reasonable?

Response:

The White-headed Woodpecker has been dropped as a management indicator species in the FEIS. The Management Indicator Assemblage Report, Appendix L of the FEIS, has been revised to show population trends at the appropriate scale to be meaningful.

Comment # 12: CC & EPIC

The DEIS page 72 states that “Removing snags in the Pilgrim Project may reduce the total snag and downed wood habitat in the short term...” but concludes “the project is unlikely to have an effect on the population trend of this species.” Explain how removal of habitat would not affect population trends.

Response:

Since completion of the DEIS most of tree marking has been done for the Pilgrim Project and none of the snags identified in the 2005 inventory were marked for removal. The FEIS, on page 77, indicates that snag densities will remain between 2 and 3 per acre after harvest and should increase to 3 or more per acre with the next decade. The FEIS, page 78, indicated that at the forest level, the snag and downed log assemblage acres are increasing and the regional population trends for the snag dependent species is also increasing.

Comment # 13: CC

The DEIS page 82 “The project area is within two 5th field watersheds, Ash Creek and the Upper McCloud River.” Page 86 states the cumulative effects for hydrology are bounded by the 8th order watershed as described in Appendix F. “The Equivalent Road Acres method of assessing cumulative watershed impacts was not used in this analysis because the 5th order watershed has a high threshold of concern (18%).” In other words, has the Forest used the actual 5th field watersheds the project area actually is in, the impacts would be too great, therefore it used a smaller area in the 8th field order to give the appearance of lesser impacts from the proposed project. Then the DEIS makes the grand conclusion “Based on these conditions, there are no cumulative effects to water and riparian resources from past actions within the watershed.”

Response:

The DEIS clearly described the lack of hydrologic connectivity to larger watersheds and on page 86 goes on to say “Characteristics of almost flat terrain, high soil infiltration rates and very low erosion hazards associated with the McCloud Flats are responsible for this high threshold.” See FEIS page 99.

Page 32 of the DEIS states that “The larger fifth field watersheds were discounted as the cumulative effects bounded area because they encompass a much larger area (about 260,000 acres) that includes mountainous terrain with different soil types, vegetation and hydrological function. These larger watersheds also include about half the Mt. Shasta Wilderness, which would dilute some effects.”

Also see response to comment # 2. See FEIS pages 98-100.

Comment # 14: CC& EPIC

The Forest Plan 4-25 states the no more than 15% of harvested lands are to be dedicated to non-productive uses such as roads, trails, and landings. It is unclear if the project is consistent with this standard.

Response:

The Transportation Section of the FEIS, page 104, states that for the Pilgrim project there are approximately 100 acres of existing roads and proposed new road construction, about 80 acres for landings and about 50 acres for skid trails which would total about 230 acres or around 6 percent of

the commercial forest land in the project area. Based on this assessment, the project is well within the 15% threshold.

Comment # 15: CC

The proposed road activities map in the back of the DEIS doesn't show where the 80 landings will be built. This information must be clearly displayed in the FEIS. DEIS #1-12 on page 150 states log landings will be determined in advance or approved by the sale administrator. A decision can't be made on this project in regard to impacts until landing sites have been decided.

Response:

The reference on page 150 is to a timber sale contract requirement. Landings are never designated in advance of awarding of a contract as different contractors use different equipment that can vary the number of landings actually needed. Landing locations are always approved by the sale administrator prior to construction and are located in openings, if they exist and outside riparian areas. The Forest Service Timber Sale Contract, Clause B6.422, requires mutual agreement on landing locations. The effect of landings is disclosed in the Transportation Section of the FEIS.

Comment # 16: CC

How will soil productivity be impacted by roads and landings? P- 107 states there will be a loss of soil productivity on about 80 acres. This statement goes no further in analyzing what the loss of soil productivity will be in relationship to additional road and landing construction, impacts to vegetation, or to the watershed.

Response:

Page 107 of the DEIS is a summary of unavoidable adverse effects. The environmental consequences to soils are discussed in the Soils Section of the FEIS and conclude " the reduction in overall soil compaction from any of the action alternatives could result in an increase in the amount of land capable of growing desired vegetation. This is because the proposed action includes subsoiling of areas with residual soil compaction, page 20 of DEIS. The Transportation Section of the FEIS does disclose an irretrievable loss of about 230 acres of commercial forest lands to landings, skid trails and new road construction.

Comment # 17: CC

Large timber sales in the Pilgrim cumulative effects analysis (CEA) area include the Davis, Hemlock, Edson, Mountain Thin, Little Horse Salvage, First Creek, Tennant WUI, Tamarack, Powder, Pomeroy, and Erickson Thin sales which total well over 100,000 acres. Of these sales, only Edson is listed in Appendix F. These other timber sales must be included in a CEA for the FEIS.

Response:

None of the sales listed are in the designated cumulative effects area defined in Appendix F. A small portion of the Hemlock sale is in the Ash Creek fifth-field watershed and was included in the vegetation diversity calculations. None of the other sales are within the two fifth-field watersheds for the Pilgrim Project. Six of these sales (Little Horse Salvage, First Creek, Tennant WUI, Tamarack, Pomeroy, and Erickson Thin) are not within the same river basin as the Pilgrim Project.

Comment # 18: CC & EPIC

The DEIS page 5 states. “Field review in June 2005 showed that the stands are continuing to succumb to western pine beetle attacks, even in root- disease infected areas that were previously thinned (1990) and recently (2005) salvaged. As a result, few healthy or live overstory ponderosa pine trees remain in several of the stands.” This statement demonstrates that thinning and salvage does little to reign in endemic beetle cycles. Why does the Forest believe doing more of the same will result in a different outcome with the Pilgrim Project?

Response:

The Pilgrim project intends to break the disease cycle that fosters pine beetle outbreaks by removing diseased trees and regenerating stands currently affected by root disease. See Purpose and Need, FEIS page 4-7. Page 40 of the DEIS states that past thinnings retained 45-60 percent canopy closure, which had little to no effect on reducing the spread of root disease. Past thinning also maintained basal area stocking above that recommend for pine stands to be less susceptible to bark beetles, DEIS, page 6.

Thinning of stands on approximately 3,100 acres is to improve stand health and resilience to bark beetle attacks. Research demonstrates that thinning to prescribed basal area reduces the incidence of pest damage to a stand. Less competition increases the health and vigor of the remaining trees resulting in a reduction of risk to bark beetle attack, DEIS page 37.

Comment # 19: CC

The DEIS page 4 indicates that 40 acres of Old growth would be harvested. Since old growth is a small amount of percentage of the area and is a limiting factor in the area, the 40 acres should be left for the species that require them.

Response:

The FEIS on page 5 states that the 40 acres of mature pine and white fir has an understory of 50 to 100 year-old trees that is overstocked at 180 to 240 square feet of basal area. It is this layer of trees that will be thinned to improve tree vigor and susceptibility to insects and disease.

Comment # 20: CC

According to the DEIS, currently about 10 percent of the project area has fuel loadings in excess of 15 to 25 tons per acre. That infers that 90% of the project area has open stands and/or does not have excessive fuel loadings, bringing the entire need for the project into question.

Response:

The DEIS page 49 goes on to say that with no action over the next 10 years another 500 acres of excessive fuel loading will develop. Reducing surface fuels is only one part of the purpose and need for this project, DEIS pages 2-10. See FEIS, pages 8-9.

Comment # 21: CC

The economy was not identified as a significant issue in scoping and should not have been a driving force in the selection of an alternative.

Response:

Economics was considered as part of the overall analysis, but was not a not a driving factor in the selection of the Preferred Alternative. See Record of Decision. The economic analysis appears in the DEIS / FEIS because the Forest Service is required to consider the economic costs and benefits of timber sales.

Comment # 22: CC

Have any of the BMP's been analyzed for success rates? Simply claiming BMP's will be used does not assure impacts will be lessened. They need to be regularly monitored for performance levels. If monitoring results are available, they should be included in the FEIS to provide assurance the claims made are legitimate.

Response:

BMP's are monitored annually on the Shasta-McCloud Management Unit. The 2004 to 2006 BMP Monitoring Reports are part of the project record for the Pilgrim Project. These reports shown all monitored sites were effective in protecting aquatic and riparian resources. See FEIS, page 100.

Comment # 23: EPIC

Rather than consider a reasonable range of alternative actions, the DEIS has considered two alternatives to the proposed action, each of which addresses only one of two primary objections to the proposed action. Why haven't you considered an action alternative which does not amend the 15% GTR forest plan standard?

Response:

The DEIS considers the no action alternative and three action alternatives in detail. These alternatives were developed to respond to unresolved issues raised during scoping. Action Alternative 3 does not amend the 15% GTR forest plan standard. Three additional alternatives were considered, but not fully developed because they failed to meet the purpose and need, or were otherwise inconsistent with laws, regulations or policies. See FEIS, pages 28-30.

Comment # 24: EPIC

We oppose the proposal to amend the Forest Plan to permit a level of logging which we are very concerned will lead to unnecessary and long-term negative impacts on soil, wildlife habitat, and fire conditions.

Response:

The DEIS discloses the impacts of four alternatives, including no action to soils, wildlife habitat, and fire conditions. Our analysis concludes that there would be no long-term negative impacts to soils, wildlife habitat or fire conditions. Surface fuels would increase under Alternatives 3 and 4. See FEIS pages 119-121 and Chapter 3, Affected Environment and Environmental Consequences.

Comment # 25: EPIC

The proposed action would degrade dispersal habitat for NSO, and would also degrade a formerly active goshawk territory; the more responsible course would be to maintain canopy closure in these areas.

Response:

The consequences of retaining a 60 percent canopy closure are disclosed on page 41 of the DEIS. See page 39-41 of the FEIS. This level of stand density is not sustainable in ponderosa pine types and leads to increased tree mortality and loss of canopy cover. It should be noted that the recent outbreak of western pine beetle infestation in the McCloud Flats was in pine stands that mostly had 60 percent or greater canopy closure. For example, in one stand that had not been thinned, over 90 percent of the pine was killed by the western pine beetle while an adjoining stand that had been recently thinned to an average basal area of 150 ft² had only endemic levels of mortality from western pine beetle.

No Goshawk territory will be degraded by the proposed actions. The one former Goshawk territory in the project area was lost to a western pine beetle infestation (page 64 of FEIS.)

Comment # 26: EPIC

We remained very concerned by the proposal to construct approximately a third of a mile of new road in the project area.

Response:

The respondent does not state what their concern is. The effects of approximately 1760 feet of construction of a single lane, earth surface road are disclosed on page 91 of the DEIS. See FEIS page 104. This road would be located on very flat terrain with no watercourses within about one mile. The proposed location is generally in open areas that avoids large trees and areas of conifer tree reproduction. The road will be closed to public traffic after its use for this project.

Comment # 27: EPIC

Very rarely does road removal and decommissioning fully rehabilitate the soils, invasive species, and fragmentation impacts of previous roads. As well, it has too often been our experience that road removals promised as mitigations in other projects are not completed as scarce resources are redirected following logging.

Response:

It is our experience that roads on the McCloud Flats that are not used on a regular basis become overgrown with trees in about 5 years and effectively remain closed. Subsoiling has proven very effective in returning compacted soils to productive use.

Noxious weeds will be monitored for three years following completion of harvest in the project area, DEIS page 21. With respect to fragmentation, this project actually reduces road density in the project area, even when the new construction is considered. See FEIS, page 103. The project economic analysis indicated adequate funds to support all the proposed road actions.

Comment # 28: EPIC

How will the forest ensure that the promised road closures and decommissioning are accomplished, particularly in view of the likelihood that ORV users will continue to try to use roads that have been only partially blocked or decommissioned, thus continuing many of the impacts of a fully operational road?

Response:

See response to comment # 27. The economic analysis, pages 113 to 117 of the FEIS, show sufficient revenue to ensure road closures and decommissioning is accomplished. The Forest Service is currently developing regulations that will restrict all OHV's to designated routes. These regulations should go into effect by late 2007 or 2008.

Comment # 29: EPIC

What will the road densities be in the project area following road removal? Will road densities be brought below the level of 2 miles of road per square mile of area (2m/m²) which has been shown to reduce habitat fitness for deer and elk?

Response:

Post project road density is disclosed on page 91 of the DEIS and will be about 3.4 miles per square mile.

There is no forest standard, policy or regulation that requires are given road density be attained. Road closures and decommissioning are done to return unneeded roads to a forested condition and reduce long-term road maintenance costs.

Comment # 30: EPIC

The DEIS offers no meaningful definition for the extent of mortality that would qualify a fire as “catastrophic” or stand-replacing. Nearly all fires result in some mortality, and much of that mortality can be seen as benign or even beneficial from an ecological point of view.

Response:

Footnote 5 on page 3 of the DEIS/FEIS defines catastrophic fire.

Comment # 31: EPIC

A recent peer-reviewed article strongly suggests that recent increases in the average size, duration, and temperature of forest fires in the western US, including Northern California, can best be explained as consequences of the effects of global warming, including an earlier snowmelt, lower overall precipitation, and higher average temperatures. How does the proposed logging in the Pilgrim project take into account these findings.

Response:

Global warming effects are beyond the scope of this analysis. One of the objectives of the Pilgrim project is reducing fuel hazards by modifying existing stand conditions, such as fuel ladders, and surface fuel which would in turn reduce fire intensity and probability of stand replacing wildfire. While global climate change was not a driving consideration, the stand density management, meadow restoration and forest health objectives that are part of the Pilgrim project are, in our opinion, all consistent with managing forest landscapes in a warmer, drier climate.

Comment # 32: EPIC

(The 40 acres of old growth) stands should be conserved; if they are thinned to reduce fire risks only the smallest (<18 in dbh) stems should be removed, and only in numbers sufficient to maintain substantial (>60% or better) canopy closure.

Response:

The prescription for this stand requires leaving all old-growth trees. Thinning is to remove hazard trees and selected trees from the suppressed and intermediate crown classes. The tallest dominant and

codominant trees that have good crown ratios and free of insect and disease damage will also be retained. Some trees over 18 inches DBH could be marked under this prescription, as this size tree is not considered old-growth. Also see response to comment # 19.

Comment # 33: EPIC

150 (square feet of basal area) is a very open stand. Taken by themselves, these indices do not seem to justify the intensity of the proposed action's proposed logging.

Response:

The prescribed residual basal area is supported by research that is cited in several footnotes in the FEIS, specifically on pages 7, 37 & 39.

Comment # 34: EPIC

The project is targeting co-dominant trees, often among the most important parts of the forest for current and future habitat. Co-dominants should be conserved in nearly every instance in these forests.

Response:

Codominant trees are not being “targeted” for removal. The thinning prescriptions are designed around reducing overcrowded forest stand conditions to a sustainable level.

The thinning prescriptions on the stand record cards all give a marking priority that is as follows:

- Leave tallest dominant/codominant with best overall condition and live crown ratio, free of insect/disease damage
- Leave intermediate crown classes with greatest vigor and live crown ratio, free of insect/disease damage
- Healthy Douglas-fir and sugar pine will be retained; there is no other species preference although species diversity is desired.

Commercial thinning could remove some otherwise healthy dominant and co-dominant trees to attain the desired residual basal area.

Comment # 35: EPIC

We are particularly concerned by the potential loss of future snags, a critical element of habitat for many species.

It is our understanding that snags, especially large ones, can persist for several decades in dry forests, even when the trees are killed by root rot.

Response:

Research cited in the FEIS shows continued tree mortality of from 1-3 trees per acre per decade in thinned ponderosa pine and up to 20 trees per acre per decade mortality for unthinned ponderosa pine,

FEIS, pages 37 & 76. Research also indicates about 10 percent of pine snags killed by bark beetle can persist up to 30 years.¹ With the existing snag density of about 2.9 per acre, some of which could remain for up to 30 years, and future mortality rate of about 1-3 trees per acres per decade, snag densities should remain around 2-3 per acre. This is within the density range recommended for suitable habitat for cavity nesting birds.

Comment # 36: EPIC

It is inappropriate to rely on Best Management Practices to avoid future damage where those BMPs have not sufficed to prevent such damage in the past. Please avoid operations with tractors in areas subject to serious compaction.

Response:

The reason for BMP's is to avoid future resource damage. Annual Monitoring of BMP's on the unit has shown all management practices to be effective in avoiding future resource damage to soils, water and riparian areas, FEIS page 100. The soils assessment does identify some legacy compaction, all associated with landings and skid trails within 200 feet of landings. These areas will be treated to reduce soil compaction, but as noted in the transportation section of the document, many of these landings will be used again in the future.

Comment # 37: EPIC

Have any surveys for Barred Owls been conducted?

Response:

Yes, Barred Owls respond to the same protocol survey methods as Spotted Owls. No Barred Owls have been detected during the last three years of surveys for this project.

Comment # 38: EPIC

In our comments to date on the project, including comments submitted by Scott Hoffman Black of the Xerces Society - all of which we hereby incorporate by reference - we have pointed out the abundant findings in peer-reviewed scientific literature that call into question key assumptions made in the Pilgrim project planning documents about the appropriateness and efficacy of "logging to control insect outbreaks."

Response:

Nowhere in the Pilgrim FEIS is there a statement that the purpose of the project is to control an insect outbreak. The purpose of the Pilgrim proposed action is to treat forest health problems associated with root disease and thin overstocked stands to prevent future insect outbreaks (FEIS pages 4-6). See also (attached) *Forest Service Summary of the Logging to Control Insects: The Science and Myths*

¹ How Long do Ponderosa Pine Snags Stand? PNW Range Experiment Station, September 1949

Behind Managing Forest Insects ‘Pests.’ Our response to scoping comments (# 24 of Appendix B) on thinning to reduce destructive insect infestations, cites several research publications that show thinning to prescribed stocking levels reduces the incidence of pest damage in forest stands. The project record contains no comments from Scott Hoffman Black.

Comment # 39: AFRC & SPI

I want to go on record as supporting Alternative 1.

Response:

An alternative will be selected by the deciding officer after consideration of the environmental effects and benefits and public comments. See Record of Decision.

Comment # 40: SIS

The no action alternative would simply allow forest health to decline even further in these forest stands and also expand to other stands. I believe, given the present situation, that not taking management actions in the area would lead to catastrophic loss of forest resource and values. I support the intent of the project and the preferred alternative.

Response:

An alternative will be selected by the deciding officer after consideration of the environmental effects and benefits and public comments.

Comment # 41: SF

Congress has directed the Forest Service, in several laws, to harvest a sustained yield of timber with harvests at regular intervals. This direction should be part of the purpose and need.

Response:

The Pilgrim Vegetation Management Project includes harvest and sale of timber that contributes to the Forest Plan allowable sale quantity (ASQ).

Comment # 42: SF

I would like to suggest an alternative that changes the dry meadow restoration stands (401, 456 and the east half of 459) into a standard pine thinning prescription, while leaving an equivalent acreage (approximately 170 acres) unplanted in regeneration units.

Response:

The extent of historic dry meadows was determined from 1944 aerial photos and is generally representative of late historic conditions.

Regeneration units are required by law to be reforested within 5 years of harvest.

Comment # 43: SF

You ought to sample mark some stands, or completely mark one stand from each major prescription, and show a stand table before and after. This will assist in explaining to the public what the project will look like.

Response:

Most of the project has been marked as of this date and the public is welcome to inspect these areas.

Comment # 44: WW

Expand unit 460 by about 10 acres and apply the same prescription (meadow restoration).

Response:

This recommendation was incorporated into the proposed action based on a previous field review of the project with the Winnemem Wintu Tribe.

Forest Service Summary of the Logging to Control Insects:

The Science and Myths Behind Managing Forest Insects 'Pests.'

Region 6 -- Forest Health & Protection

November 2005

This 82-page report summarizes 177 published reports concerning the effects of “logging,” thinning, and other stand management techniques on conifer attack and mortality caused primarily by bark beetles or defoliating insects. There are 150 published articles that are annotated. The report has not been published in a refereed journal nor does it appear to have been peer-reviewed. The sole author of the report, Scott H. Black, is the executive director of the Portland-based Xerces Society for Invertebrate Conservation. He has degrees in ecology, horticulture, plant science, and entomology from Colorado State University.

One of the major problems with the Black report and its title is that the author fails to define the terms “logging” or “thinning.” The Dictionary of Forestry by J.A. Helms (1998) defines “logging” as “the felling, skidding, on-site processing, and loading of trees or logs onto trucks.” It is synonymous with “harvesting.” Helms defines thinning as “a cultural treatment to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.” The Black report appears to differentiate “thinning” from “logging” when, technically, thinning can be a form of logging especially when trees in thinned stands are selectively felled and loaded onto trucks. Because the term “logging” is not defined in the report, it is difficult to support statements concerning the effects of “logging” especially since the term is seldom used in the literature that is cited in the report. This becomes especially confusing to the public and politicians, who rarely differentiate “logging” from “thinning” when comments are made about the effects of “logging” on forest insects.

One key finding of the Black report is that “there is no evidence that ‘logging’ can control bark beetles or forest defoliators once an outbreak has started.” Despite the fact that the terms “logging” and “control” are not defined in the report, it is generally accepted by most forest scientists and managers that this statement is true. The bulk of the literature cited, however, says that prevention of bark beetle attacks by thinning overly dense forests **before**, rather than after an outbreak has started is one of the best methods of reducing infestation and preventing mortality caused by bark beetles on residual trees, should they occur (Sartwell and Stevens 1975, Cole and Cahill 1976, Mitchell et al. 1983, Amman and Logan 1998, Kolb et al. 1998, McDowell et al. 2003; all cited in the Black report).

An extensive compilation of scientific literature is listed under subject matter headings that implies that this literature supports the views and conclusions expressed in the Black report. For example, another key finding of the Black report is that “although thinning has been touted as a long-term solution to controlling bark beetles, the evidence is mixed as to its effectiveness.” Although the author has cited many fine papers that report studies concerning thinning effects on bark beetles, he fails to properly summarize their significance. For instance, of 18 cited papers that report the effects of thinning on bark beetles, 14 of these clearly show a positive effect of thinning on preventing bark beetle attack and mortality of the residual trees. The Black report cites 42 papers under “Effectiveness

of Thinning” but only 18 of these papers report the effects of actual “thinning” on bark beetles. The other 24 cited papers report the effects of stand density, salvage-logging, tree physiology, fire, or other stand conditions **but not thinning** on bark beetle populations and dynamics. Thinning is a well-established and universally accepted prevention strategy by professional foresters and scientists to significantly reduce susceptibility to endemic bark beetle activity.

The Black report contains many generalities that are accepted by most scientists and foresters. There are many statements, however, within the report that are taken out of context, misleading, or simply not true. For instance, it is not true that all Buprestidae “infest only dead and already dying trees.” As an example, the bronze birch borer (*Agrilus anxius*) typically attacks live birch (Solomon 1995). Similarly, the flatheaded fir borer (*Phaenops drummondi*) on Douglas-fir and spruce and the California flatheaded borer (*P. californica*) on ponderosa and sugar pine have been reported to attack and kill living trees under stress (Furniss and Carolin 1977). The statement, “It is commonly accepted that fire suppression and logging have led to simplified forests...” is not correct and is not supported by the references cited. Typical old-growth ponderosa pine stands that were subjected to frequent periodic and naturally occurring underburns are, in fact, very simple systems. Fire suppression and selective harvesting of the largest pines have converted these ecosystems into vegetatively diverse systems with shade-tolerant true fir and Douglas-fir that are subject to many forest health problems, including insect, disease, and wildlife-caused tree mortality (Goheen and Hansen 1993, Hessburg et al. 1994, Ferrel 1996, Filip et al. 1996).

In the Black report, literature is selectively cited, and opinions are extrapolated from research that often is inappropriately used to support the points being made. For example, where “logging” or “management” is cited as causing or aggravating bark beetle attack, most are examples of outdated or improperly done management techniques that are not indicative of good forestry practices today. The report states that “high-grade logging increases the relative abundance of shade-tolerant trees, which are more susceptible to insects.” High-grade logging has not been considered a proper silvicultural technique by most if not all current foresters and forest managers for many years.

Many of the cited examples of logging/bark beetle dynamics are from mixed-conifer coastal forests where bark beetle-caused tree mortality is often minor compared to beetle outbreaks in the drier eastside or interior forests of western North America. Extrapolating information collected in one type of ecosystem and inferring that it applies equally to a totally different ecosystem is not appropriate use of the literature. Also, the Black report cites literature from Mexico or Europe, which may have little or no relevance to logging/bark beetle dynamics in western USA and Canada.

The Black report advocates that natural processes be the preferred response to forest health problems and issues with minimal human intervention. There is an overlying theme in the report that only “nature” can properly “manage” forests. The author considers that actions taken by humans are outside of controls that occur “in nature.” Management or societal objectives (such as protecting or enhancing threatened or endangered species; protecting and maintaining existing or future old-growth

forests; or reducing fuels within urban/wildland interface) that require human intervention to achieve a desired outcome or in a more timely manner, are largely ignored.

In several places throughout the manuscript, the author juxtaposes two unrelated statements or studies that lead a reader with no background in forest entomology or forestry to erroneous conclusions. For example, in the executive summary it is stated that “many in the timber industry see them (insects) as agents of destruction ... and some foresters believe that the solution to the problem is increased logging.” The unstated and erroneous assumption is that federal and state agencies support this view when the conclusion is reached: “There is an urgent need for federal and state agencies and land managers to reevaluate their current strategy for managing forest insects...”

In conclusion, the Black report contains many examples of erroneous statements that are not even supported by the report’s cited literature. Professional foresters and land managers will be able to see this deficit. Unfortunately, this report may be viewed by others as refuting hundreds of published papers on effectively managing forest insects and diseases, which it does not. It will be more unfortunate when a poorly written but popular document such as the Black report is used as supporting information during litigation. During any project analysis, such a document should be considered in the context of its biased authorship, limited credibility, and dubious scientific value. It is recommended that analysis teams refer directly to the appropriate refereed or peer-reviewed literature and site-specific data, rather than popular review reports such as this.