Blue Mtns Biodiversity Project comments . . .

Direct Effects for Forest Structural Stages - Alternatives B and C

Forest structure, as represented using structural stages, is expected to change in response to implementation of silvicultural activities proposed for Alternatives B and C (Table 3-27). Although some of the existing old-forest stands (OFMS and OFSS) would be affected by proposed silvicultural activities in these alternatives, the overall amount of old forest is expected to increase after implementation because:

(1) Only improvement cutting is proposed for existing old-forest stands, and the post-treatment structural stage remains old forest after intermediate treatments are implemented.

(2) Improvement cutting is used to convert certain stands of stem exclusion or understory reinitiation to old forest when they have a sufficient number of large-diameter trees (10 or more per acre that are 21-inches DBH or larger in diameter) to qualify as old forest after treatment.

(*) This does not really convert the stand to old forest or increase overall old forest acreage!

The stand initiation structural stage increases as a direct effect of implementing Alternatives B and C (Table 3-27), which improves the representation of this structural stage because stand initiation is either slightly below HRV (dry upland forest PVG) or in the bottom half of the historical range (moist upland forest PVG) for the forest vegetation affected environment (Table 3-20).

Table 3-27 Direct Effects for Forest Structural Stages - Alternatives B and C

	Pre-Implementation		Post- Implementation		Difference
Structural Stage	**Acres**	**Percent**	**Acres**	**Percent**	**Acres**
SI	0	0	800	21	+ 800
SEOC	760	19	1,440	37	+ 680
SECC	1,060	27	0	0	(–1,060)
UR	1,060	27	0	0	(–1,060)
OFMS	360	9	280	7	(–80)
OFSS	660	17	1,380	35	+ 720

Sources/Notes: Summarized from the South George vegetation database (forested, suitable, NFS lands on the portion of the forest vegetation affected environment included within Alternatives B and C – approximately 3,900 acres). Refer to Table 3-19 for information about the structural stages and how they were derived.

Indirect Effects for Forest Structural Stages - Alternatives B and C

Table 3-28 below shows that the direct effects of implementing silvicultural activities associated with Alternatives B and C has obvious indirect effects on forest structure when spread across the entire forest vegetation affected environment. As a result of implementing Alternatives B and C, the representation of five structural stages (SI, SEOC, SECC, UR, and OFSS) is expected to experience enough change to modify their overall proportion of the affected environment by 5 percent or more. The representation of two structural stages either has no change at all (YFMS), or the change in overall proportion of the affected environment is only 1 percent OFMS.

In summary, the implementation of silvicultural activities associated with Alternatives B and C does not result in more of the forest cover types, forest structural changes, and tree density classes moving within their historical ranges because of the following two factors:

1. A relatively low proportion of area (acreage) is being treated, which limits the opportunity to change under- or over-represented forest cover types, forest structural changes, and tree density classes. Alternatives B and C only affect 25 percent of the forested portion of the planning area, and only 28 percent of the forest vegetation affected environment (see Table 3-16).
2. Proposed silvicultural activity units cannot generally address every issue simultaneously. Very few individual units address all three of the forest vegetation indicators (composition, structure, density) concurrently, so certain activity units directed toward one indicator (composition) may have a neutral or negative effect on another indicator (structure or density), depending on a unit's suitability for addressing indicators, and on priority setting between units.

Cumulative Effects Common to Alternatives B and C

Species Composition, Forest Structural Stages and Tree Density Alternatives B and C

Past actions (page 3-2), including timber harvest, tree planting, and noncommercial thinning, helped create existing conditions in the planning area. The proposed action is designed to address the project's purpose and need by improving forest health, vegetation vigor, and ecosystem resilience to fire, insects, and disease. Proposed silvicultural activities respond to the purpose and need by helping to move species composition, forest structure, and tree density back within their historical ranges of variability.

Present (ongoing) actions (page 3-3) include vegetation management activities in the Park Ridge portion of the planning area. Park Ridge activities were designed in such a way as to address similar issues and concerns as those influencing the South George project. Therefore, they represent incremental actions (beyond the proposed actions) that are also largely responsive to the South George project's purpose and need. Reasonably foreseeable future actions, which include non-commercial thinning and prescribed fire activities beyond what is included in the South George proposed action, would also contribute to the project's purpose and need by reducing tree density and surface fuel loadings, and by increasing representation of early-seral tree species, but only on relatively limited portions of the project planning area.

When considering the direct and indirect effects of the project's proposed action on forest health, vegetation vigor, and ecosystem resilience (as reflected by changes in species composition, forest structure, and tree density following implementation of proposed actions), and when evaluating how the direct and indirect effects of past actions, present (ongoing) actions, the proposed action, and reasonably foreseeable future actions overlap in both space and time, then the cumulative effects for Alternatives B and C are considered to be mostly positive (because present and reasonably foreseeable actions also utilize design criteria similar to those for Alternatives B and C proposed action). The estimated cumulative effects for Alternatives B and C are considered to be positive when compared with those for Alternatives A and D.

(*) We disagree that the cumulative effects would be positive compared to Alts. A or D as the arguments for logging are not convincing. This is inadequate cumulative effects analysis as it fails to considerable future foreseeable commercial logging.

Please mail us a print copy of the Silviculture Report, including Appendix B. & Appendix D.

positive than those associated with Alternatives B and C. The estimated cumulative effects for Alternative D are considered to be positive when compared with those for Alternative A – No Action.

FINDINGS OF CONSISTENCY

As described in this section, silvicultural activities proposed for implementation in the South George project are fully consistent with Umatilla National Forest Land and Resource Management Plan (Forest Plan), as amended, and all of its relevant components (management area allocations, standards, guidelines, objectives, desired future conditions, etc.).

Documentation of consistency with the Eastside Screens amendment and National Forest Management Act are located in Appendix C of this document.

INSECT AND DISEASE SUSCEPTIBILITY

An important objective of the proposed forest vegetation silvicultural activities is to address issues related to insect and disease susceptibility (refer to project file, Silviculture Report, Appendix B for susceptibility characterization results for six insect or disease agents for which the South George planning area provides habitat or host type). Susceptibility refers to the potential for a disturbance event (wildfire, insect outbreak, disease epidemic, etc.) as based on inherent or intrinsic stand characteristics such as species composition, tree density, forest structure, etc. (Schmitt and Powell 2005).

Why is this?

Although susceptibility was not used as an indicator when characterizing the forest vegetation affected environment, or when estimating the environmental consequences of alternative implementation this section reports how susceptibility ratings would be expected to change as a result of implementing the proposed silvicultural activities. Since existing susceptibility is particularly high in the South George project planning area for two insect or disease agents – defoliators (western spruce budworm and Douglas-fir tussock moth) and fir engraver pre- and post-treatment estimates of their susceptibility ratings would be reported below for the portion of the forest vegetation affected environment included in Alternatives B and C and in Alternative D.

Having an ecologically appropriate representation of insect and disease susceptibility conditions well distributed throughout the South George project planning area is a desired future condition for forest vegetation. The information presented in Table 3-42 suggests that implementing the alternatives would move a substantial proportion of the treated acreage from a high or moderate susceptibility condition (the pre-treatment condition) to a moderate or low condition (the post-treatment situation). The results presented in Table 3-42 suggest that the proposed silvicultural activities would be at least moderately successful at addressing the issues related to insect and disease susceptibility.

So what forest type (eg. dry Ponderosa pine vs. moist mixed conifer) is used for assumptions in Schmitt and Powell (2005)? How is this evidence applicable to the project area or to moist mixed conifer?

Table 3-42 Estimated Effect of Alternative Implementation on Susceptibility Ratings for Defoliating Insects (Budworm/Tussock Moth) and Fir Engraver

	*Pre-Treatment (Acres)			*Post-Treatment (Acres)		
	High	**Moderate**	**Low**	**High**	**Moderate**	**Low**
Defoliators						
Alternatives B and C	1,940	1,960	0	0	1,300	2,600
Alternative D	960	1,640	0	0	920	1,680
Fir engraver						
Alternatives B and C	2,500	1,090	310	0	1,800	2,100
Alternative D	1,360	940	300	0	1,270	1,330
*** All table values rounded to nearest 10 acres**						

Sources/Notes: Summarized from the South George vegetation database (forested, suitable, NFS lands on the portion of the forest vegetation affected environment included within Alternatives Band or C (approximately 3,900 acres) or Alternative D (approximately 2,600 acres)). Refer to Appendix A in the Siviculture Report, specifically the Insects and Diseases section, for information about the insect and disease susceptibility ratings and how they were derived. (*) This is inadequate climate change analysis, which should quantify and analyze potential contributions to climate change from the (*) project.

CLIMATE CHANGE ANALYSIS

The proposed action (Alternative B) would affect approximately 3,900 acres of National Forest System lands by implementing commercial thinning, improvement cutting, seed-tree cutting, clearcutting, and tree planting silvicultural activities. The scope of the proposed action is minor because silvicultural activities are proposed for only 19 percent of the total planning area acreage (see Table 3-16), 1.1 percent of the Pomeroy Ranger District, 0.2 percent of Umatilla National Forest, and 0.08 percent of the Blue Mountain national forests (Malheur, Umatilla, Wallowa-Whitman). A project of this magnitude would contribute such minimal amounts of greenhouse gas that its impact on global or national climate change would be infinitesimal. Therefore, the proposed action's direct and indirect contribution to greenhouse gasses and climate change would be negligible.

This de minimus approach to climate change approach is used to skirt the issues of cumulative contributions, & the agency's responsibility for reducing CO_2 emissions & not decreasing carbon storage in forests.

In addition, because direct and indirect effects would be negligible, the proposed action's contribution to cumulative effects on greenhouse gasses and climate change would also be negligible.

(*) Every project could be excused on this basis despite net climate change impacts.

The minor scope of the proposed action suggests it would be inappropriate to attempt to isolate climate change effects that are directly or indirectly attributable to implementation of South George project. Our current understanding of climate science suggests it is difficult, if not impossible, to establish a cause-and-effect relationship between silvicultural activities and climate change at a project scale. Therefore, climate change was not used as an issue during the NEPA process, and no indicators were established for comparing climate change effects between alternatives. and for considering other alt.s.

Certain principles and concepts of climate change, however, can be used to assess whether silvicultural activities included in the proposed action would be expected to maintain or enhance forest adaptation to the predicted effects of climate change. A discussion of additional climate change and carbon sequestration considerations is provided in the Appendix D, pages 111 to 130, in the Silviculture Specialist Report located in the project file.

Two general strategies are used to address climate change: mitigation and adaptation. Mitigation involves reducing greenhouse gas emissions now in order to minimize the current pace and magnitude of climate change. Adaptation accepts that climate change would occur (and already is occurring), so it involves making ecosystems more resistant and resilient to the predicted effects of future climate fluctuations.

(*) The DEIS is avoiding analysis of possible mitigation of this project's emissions re: Climate Change.

(*) There is no compelling evidence presented in the DEIS that forest slated for "improvement" logging would not continue to support forest in the future without logging.

(*) This analysis fails to disclose scientific controversy (*) ↓ See contradictory science (not disclosed in the DEIS) on both wildfire & climate change included in our comments as excerpts from our multiple group petition to uplist the Blackbacked woodpecker.

Two silvicultural activities included in South George proposed action are considered to be compatible with a mitigation strategy (Baron et al. 2008, Nabuurs et al. 2007, Reyer et al. 2009, Salinger et al. 2005) – intermediate cutting (thinning and improvement cutting) and tree planting both contribute to a "maintain forest area" mitigation objective (i.e., ensure that lands currently supporting forest continue to support forest in the future) (Nabuurs et al. 2007).

While mitigation is crucial, adaptation to climate change is increasingly viewed as a necessary and complementary strategy to mitigation (Joyce et al. 2009). Table 3-43 includes a list of adaptation strategies proposed for the National Forest System as a whole, and pertaining to forest vegetation (these are shown in the left column). Table 3-43 also describes how silvicultural activities included in South George proposed action could be compatible with adaptation strategies (shown in right column).

The Intergovernmental Panel on Climate Change (IPCC) concluded with high confidence (8 out of 10 chance) that "disturbances such as wildfire and insect outbreaks are increasing and are likely to intensify in a warmer future with drier soils and longer growing seasons, and to interact with changing land use and development affecting the future of wildland ecosystems" (Parry et al. 2007, page 56). This IPCC conclusion demonstrates that climate change involves more than just the direct effects of warming temperatures and variable precipitation, it includes indirect effects of climate change on wildfire, insect outbreaks, and other biotic and abiotic disturbance processes.

Information in Table 3-43 indicates that silvicultural activities addressing stand vulnerability to uncharacteristic levels of wildfire, along with other climate-related changes in disturbance regimes, could meet multiple goals of near-term mitigation and mid-term adaptation if such practices also reflect goals for other ecosystem services such as late-old structure and water quality (Joyce et al. 2009).

Table 3-43 Compatibility of Silvicultural Activities and Climate Change Adaptation Strategies

Climate Change Adaptation Strategies That Are Related to Forest Vegetation	Predicted Compatibility of Strategy with South George Proposed Silvicultural Activities
Improve the capability of ecosystems to withstand uncharacteristically severe drought, wildfires, and insect outbreaks at landscape scales.	Rationale for silvicultural activity proposals is based largely on insect and disease susceptibility and the potential to reduce uncharacteristic fire hazard, particularly for dry-forest sites (see Chapters 1 and 2, and Appendix A of the Siviculture Specialist Report in the project file). The low thinning activity would be aggregated as large blocks to emulate the spatial extent produced historically by surface fire (Heyerdahl 1997). Actually the low thinning is a very small part of logging planned.
Facilitate natural (evolutionary) adaptation through silvicultural treatments that shorten regeneration times and promote interspecific competition. (*) This ignores science that identifies mature & large trees has storing far more carbon than seedlings.	The proposed action includes regeneration cutting and tree planting, both of which are responsive to shortened regeneration times and promotion of interspecific competition. Planting emphasizes a mixed species composition and good representation of early-seral species, both of which are predicted to be more compatible with future climate conditions in the planning area.
Where ecosystems will very likely become more water limited, manage for drought- and heat-tolerant species.	Specifications for how silvicultural activities would be implemented account for species-specific life history traits influencing drought and heat resistance. Drought-tolerant species are preferentially retained during intermediate cutting, and they are also emphasized in the species mix to

No one else claims that regeneration cutting (clearcutting) reduces homogeneity!

Climate Change Adaptation Strategies That Are Related to Forest Vegetation	Predicted Compatibility of Strategy with South George Proposed Silvicultural Activities
	be planted after regeneration cutting.
Reduce homogeneity of stand structure and synchrony of disturbance patterns across broad landscapes by promoting diverse age classes and species mixes, stand diversities, and genetic diversity. Actually planned logging & tree planting would increase homogeneity of stands & decrease diversity & species mix	The rationale for proposing certain silvicultural activities is based on results from an HRV analysis, and several HRV components (composition and structure) properly account for age-class, species, and successional-stage diversity. Tree planting promotes a diverse species composition rather than single-species stands. Regeneration cutting introduces or enhances landscape heterogeneity by reducing homogeneity. Right now stands are not just single species. Logging would eliminate much Englemann spruce & Grand fir.
Reset ecological trajectories to take advantage of early successional stages that are adaptive to present rather than past climates.	Regeneration cutting would reset ecological trajectories for activity units in which it is proposed; the tree planting activity would use a mixed species composition featuring early-seral (early successional) tree species.
Use historical ecological information to identify environments buffered against climate change and which would be good candidates for conservation. Converting moist forests artificially to dry forest types through heavy logging & replanting is not the intent behind this strategy but counter to ecological trends.	Although climate change could possibly affect the full range of biophysical environments, we believe that the historical structure associated with dry forests (e.g., a low-density cohort of large-diameter, fire-resistant trees featuring ponderosa pine) is likely to be resilient to predicted climate change. Proposed silvicultural activities are directed toward conserving this structure when it currently exists, or restoring it if important biological legacies (such as large trees) are still present. Using regeneration cutting and thinning would introduce heterogeneity on moist-forest sites and create resilient tree density levels on all biophysical environments.
Encourage local industries that can adapt to or cope with variable types of forest products because of the uncertainty about which tree species will prosper in the future. Providing saw logs is not encouraging diversification of the timber industry toward sustainability.	It is anticipated that some portion of the silvicultural activity involving timber harvest (intermediate and regeneration cutting) would be accomplished using stewardship authority or another alternative that would not involve a standard timber-sale contract. Local stewardship or biofuel/bioenergy industries are capable of dealing with unconventional species or product types.
Reforestation after disturbance may require different species than were present before the disturbance to better match site-level changes associated with climate change. This is only true if species are out of sync with the forest type.	The reforestation activity would utilize a mixed species composition emphasizing early-seral, drought-tolerant species. All of the species are currently present in the planning area; at the present time, there is no proposal to adapt to the future effects of climate change by introducing a non-native species.
After a disturbance event, use intensive site preparation activities to remove competing vegetation and replant with high-quality, genetically appropriate and diverse stock.	After implementation of the regeneration cutting silvicultural activities, the tree planting activity would be completed by using conventional (non-intensive) removal of competing vegetation (hand scalping), and the seedlings

⊛ We are strongly opposed to the planned reduction through logging & burning of Subalpine fir & Englemann spruce (biodiversity!) and to proposed "widest reasonable spacing" of trees post-logging.

Climate Change Adaptation Strategies That Are Related to Forest Vegetation	Predicted Compatibility of Strategy with South George Proposed Silvicultural Activities
	to be outplanted would be produced from genetically diverse (but local) seed sources.
To promote climate resilience for existing stands, use widely spaced thinnings or shelterwood cuttings and rapid response to forest mortality from fire or insects.⊛	The intermediate cutting (thinning) and seed-tree cutting treatments would be implemented to the widest reasonable spacing; rapid response to forest mortality is not included in the proposed action for the South George Vegetation Management Project.
Plan for higher-elevation insect outbreaks, species mortality events, and altered fire regimes. ⊛ This does not mean that the Forest Service should greatly reduce or eliminate tree species more vulnerable to climate change!	Silvicultural activities proposed for implementation on moist-forest sites anticipate accelerated mortality of subalpine fir (which is currently occurring at high levels due to an infestation of balsam woolly adelgid, an introduced, non-native insect species), Engelmann spruce, and other species that are predicted to not fare well under future climate conditions (Rehfeldt et al. 2006).

Yet elsewhere the DEIS admits that precipitation & moisture are particularly high in the So. George project area. Higher precip. allows for sustainable denser forests, even w/ climate change.

Sources/Notes: the climate change adaptation strategies pertain to forest vegetation only and were derived from Joyce et al. (2008, 2009) and West et al. (2009). The predicted compatibility of each adaptation strategy with silvicultural activities included in the South George proposed action was provided by the author of this specialist report. ⊛ Table 3-43 is misapplication of the science (in right column).

SUMMARY: COMPATIBILITY OF SILVICULTURAL ACTIVITIES WITH PREDICTED CLIMATE CHANGE

Three categories of silvicultural activities are included in the South George proposed action: intermediate cutting (improvement cutting, low thinning), regeneration cutting (clearcutting with reserves, seed-tree cutting with reserves), and tree planting (see Chapter 2, pp. 2-5 to 2-11). Predicted changes in future temperature and precipitation for a large region containing the South George project planning area are expected to have varying interactions with silvicultural activities included in the South George proposed action.

1. **Intermediate Activities (improvement cutting, low thinning).** Climate modeling suggests that drought conditions will be more common in the future because mid-summer temperatures are expected to be substantially higher than at present. Dense tree stands exist in a sort of perpetual physiological drought because there is not enough soil moisture to meet the water needs of all trees; intermediate cutting is used to alleviate this moisture stress and allow the residual trees to survive and continue growing. It is expected that future climate conditions would have demonstrably more impact on dense stands than is produced by the current climate. Therefore, the need for thinning and related intermediate treatments is expected to be much greater in the future than at present because thinning improves physiological vigor, and trees with improved vigor produce more of the resins used to repel insect and disease attacks (Kolb et al. 1998, Mitchell et al. 1983, Pitman et al. 1982, Safranyik et al. 1998). Thinning also disrupts canopy fuel continuity, which could help address future crown-fire risk (Agee 1996, Powell 2010, Scott 1998). Insect outbreaks and wildfire are both predicted to occur at significantly higher levels in a warmer and dryer future than at present (Canadell and Raupach 2008, Kurz et al. 2008a, Westerling et al. 2006).

⊛ This ignores higher overall precipitation trends in the region, later snowpack, & fewer fires in recent years as a steady trend. This is also not differentiating between dry & moist forest types. See enclosed science cites not considered in this DEIS.

(*) This would actually dry out forest sites that would otherwise retain more shade & moisture, thus exacerbating climate change effects, not reducing them. (*) This section reflects failure to disclose scientific controversy, misapplication of science (inaccurate use) and lack of professional integrity.

2. **Regeneration Activities (clearcutting, seed-tree cutting).** These silvicultural activities are expected to cause the greatest difference between pretreatment and post-treatment conditions by creating open, unshaded environments in the near-term. Since climate change is expected to cause warmer, dryer conditions in the mid-term, it would be useful to consider the life-history traits of native trees and how they might influence the fitness of a species to thrive in post-regeneration conditions and to persist under future climate conditions. The life-history traits of tree species in the South George project planning area suggest that ponderosa pine, western larch, western white pine, and lodgepole pine will be well-adapted to the open conditions created by regeneration cutting. When considering the predicted impact of climate change on temperature and precipitation, and when considering the indirect effects of climate change on wildfire and insects (Canadell and Raupach 2008, Westerling et al. 2006), it is likely that the same four species, along with Douglas-fir, will be best adapted to the future climate of the planning area. Table 3-43 also describes how regeneration cutting can be advantageous (in a climate change context) because it promotes early-successional stages that are adapted to present rather than past climates.

(*) The future climate & growing conditions in the project area are not certain - and should not be used to justify elimination of naturally moist mixed conifer tree species or "regeneration" cutting. (clearcutting) This is gross misuse of the science.

3. **Tree Planting.** This silvicultural activity would be used to reestablish tree cover in areas affected by regeneration cutting (clearcutting, seed-tree cutting). When considering the life-history traits of tree species in the South George planning area, many of which have a direct bearing on reproductive capacity, the species to be emphasized during implementation of the tree planting activity are: ponderosa pine, western larch, western white pine, lodgepole pine (only if natural regeneration is inadequate for this species), and Douglas-fir. These five species are the same ones identified above (item #2) as being most adaptable to future conditions affected by climate change. This means that species with optimal fitness for post-harvest environmental conditions are also predicted to have acceptable fitness for a warmer and dryer climate. Note that natural regeneration is expected to occur in areas receiving the regeneration cutting silvicultural activities, so the ultimate species diversity for these areas will likely be greater than just the five species being planted. (*) In other words, natural regen. would not be just or mostly the species planted.

This climate-change review considering predicted temperature and precipitation changes at a broad scale (Washington State) suggests that silvicultural activities included in the proposed action adequately anticipate future climate change, appropriately provide for future ecosystem resiliency and integrity, and reasonably realign existing conditions to be more sustainable under future climate conditions (Dale et al. 2001). We disagree.

FUELS

This section incorporates by reference the South George Fuels Report contained in the project analysis file at Pomeroy Ranger District. Specific information on the methodologies, assumptions, and limitations of analysis and other details are contained in the report. A summary of the current conditions of the affected environment and the predicted effects of the Proposed Action and its alternatives are discussed in this section.

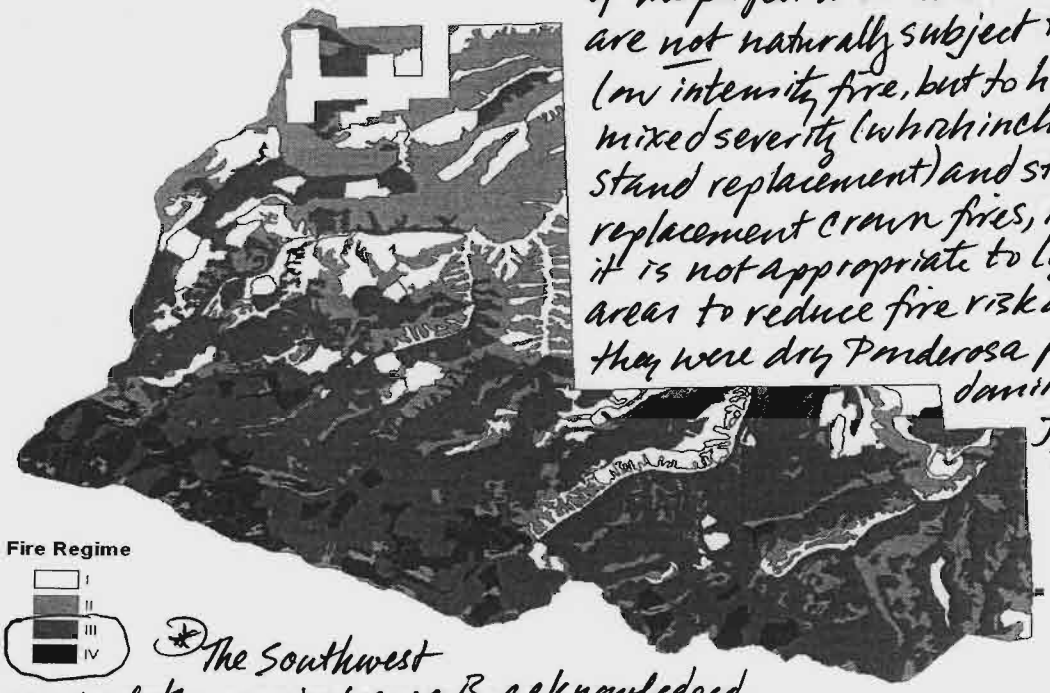
SCALE OF ANALYSIS

The South George project planning area is located on Pomeroy Ranger District and is approximately 21,000 acres in size. Project activities, in conjunction with past, ongoing, and reasonably foreseeable

Crown Fire Potential - Crown fire potential describes a stands ability to initiate and sustain a crown fire. Some fire regimes experience crown fires under historic conditions (Fire Regime IV). Others, such as Fire Regime I and III, sustained crown fires are very uncharacteristic. Forty-eight (48) percent of the South George planning area is categorized as Fire Regime III, (mixed severity fire regime) and 18 percent Fire Regime I (low severity) (Table 3-45). Stand fire coverage developed to analyze crown fire potential for South George project planning area estimated that 64 percent of the planning area is susceptible to crown fire.

Figure 3-3 shows existing fire regimes in South George project planning area.

Figure 3-3 illustrates that most of the project area and sale units are not naturally subject to frequent low intensity fire, but to historic mixed severity (which includes stand replacement) and stand replacement crown fires, indicating it is not appropriate to log these areas to reduce fire risk as if they were dry Ponderosa pine-dominant forest types.



The southwest part of the project area is acknowledged elsewhere in the DEIS to be higher elevation, and thus naturally moist mixed conifer forest historically subject to crown fire & stand replacement fire on a less frequent basis.

This section on Fuels fails to discuss and analyze the scientific controversy surrounding Forest Service use of Fire Regime Condition Classes.

We are concerned that heavy and intermediate logging removes too much natural density and future mature-large trees and snags with the misapplication of fire risk reduction strategies, threatening habitat suitability for Pileated woodpecker, American Three-toed & American marten, Black-backed woodpecker, Northern Goshawk, Flammulated owl, and other species requiring dense forest and/or high levels of snags + down wood.

*Where is the analysis as to why it is considered necessary to log old forest - even when it is under HRV - and to log trees ≥ 21" dbh? Lack of analysis to justify proposed actions

Two Dedicated Old Growth (C1) areas are within the project planning area (see Table 3-60). At the time these areas were designated, they were classified as capable pileated woodpecker habitat.

Table 3-60 Dedicated Old Growth Areas (C1) in the Project Planning Area

ID No.	General Area	MA-C1 Acres	Stand characteristics
2622	Redhill Gulch	500	Dry Douglas-fir, grand fir, larch and pine, two layers, closed canopy, riparian.
0192	George Creek	330	Moist grand fir, larch and spruce, two layers, closed canopy, riparian on west side.

Does not sound dry

Old Forest Stands

Umatilla National Forest Plan Amendment #11 established interim riparian, ecosystem, and wildlife standards for timber sales (the Eastside Screens) (USFS 1995). It requires that certain categories of timber sales be screened to evaluate their potential impact on riparian habitat, historical vegetation patterns, and wildlife habitat fragmentation and connectivity. The Interim Wildlife Standard restricts the harvest of timber in stands with a predominance of large trees (>21 inches DBH) if the amount in the area is below the historical range. Umatilla Forest uses the silvicultural terms Old Forest Multi Strata (OFMS), and Old Forest Single Stratum (OFSS) structural stages to assess where and how much large tree habitat is available.

Old forest is present on about 4,800 acres, or about 31 percent of the total forested portions of the entire project planning area (of 15,430 acres). There are several larger patches of old forest (> 300 acres). About 10 percent of the moist forest contains old forest in patches greater than 300 acres, and about 22 percent of the dry forest contains old forest in patches greater than 300 acres.

* The amount of old forest in South George project planning area is within the historical range of variability (HRV) in dry upland forest, but is below the historical range in moist upland forest, multi story. Therefore, harvest may occur in dry old forest as long as the area stays within HRV. However in moist
* old forest, stands can only be manipulated if the goal is to preserve or enhance old forest character.

Old Forest Connectivity

Connectivity between blocks of old forest (OFMS, OFSS) has been assessed for the project planning area. Connective habitat does not necessarily need to meet the same description of old forest, but provides free movement between old forest stands for various wildlife species associated with these stand conditions.

For the majority of the project planning area, old forest stands and C1 management areas are connected to each other with medium (9-15 inches DBH) to large tree (>15 inches DBH) stands with widths greater than 400 feet, and attached with 2 or more different connections. Connective stands are primarily in the Young Forest Multi Strata (YFMS), Stem Exclusion open and closed canopy (SEOC/SECC), and Understory Reinitiation (UR) structural stages. The least connected areas are separated by grassy ridges or areas that have not yet grown back to maturity since the last timber harvest.

ENVIRONMENTAL CONSEQUENCES – Old Forest (Key Issue)

Alternative A - No Action

Direct/Indirect Effects

In the NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alterntative. This does not mean conditions on the ground would remain static, they would in fact, continue to change as disclosed below.

Existing Dedicated Old Growth (C1) and other old forest structure would remain in its current state in the short-term. No trees ≥ 21 inches DBH would be removed. Over time, some stands would develop habitat characteristics that would result in additional old forest and connective corridors.

The area would continue to develop dense, multi-storied stands with forest composition continuing to shift towards fire intolerant species dominance (Silvicultural Specialist Report, project file). Where dry forest stands continue to have fir encroachment, they would be less attractive for use by species that prefer open pine stands. Tree disease and insect infestations could reduce old forest and connectivity corridors in the mid and long term.

Without any fuel reduction treatments, much of the area would remain at risk for historically uncharacteristic crown fire (Fuels Report, project file). There is an associated risk that old forest structure and connectivity could be lost on a large scale in the event of an uncharacteristically large-scale, high severity fire.

Cumulative effects

For the No Action alternative, South George project would not be authorizing any actions; therefore, it would not be adding anything to the effects of past, present and reasonably foreseeable future actions. Based on the definition provided in the CEQ regulations (p. 3-1), there would be no cumulative effects for the No Action Alternative.

Effects Common to All Action Alternatives

Direct/Indirect Effects - Alternatives B, C, and D

Dedicated Old Growth

Prescribed landscape burning could creep into C-1 Dedicated Old Growth areas but would likely be stopped by the streams along their border. No other activities are proposed within management area C1. The existing abundance and distribution of Dedicated Old Growth meets Forest Plan standards. The current composition, structure, and function of these areas would be maintained under all of the proposed alternatives in the short-term. In the mid and long-term, these dedicated areas may deteriorate to the point they no longer provide old growth habitat.

Old Forest and Connectivity

While the amount of old forest treated by timber harvest varies by action alternatives (Table 3-61), the resulting net change in the amount of old forest does not (Table 3-62). There would be a decrease in the amount of dry OFMS, and an increase in all other old forest categories. The result is a 640 acre net increase in total old forest in all action alternatives (B, C, and D).

(*) insufficient range of alternatives: lack of choice between all action alts re: old forest retention

(*) Tree vigor should not be an adequate justification - particularly old growth mixed conifer multistrata forest, Grand fir, & Engelman Spruce - especially as these forests depend on decadence, downwood + snags for habitat + nutrients,

(*) We are opposed to conversion of OFMS to OFSS.

The fact that all alternatives result in the same 640 acre net increase in old forest is because the same OFMS would be converted to OFSS in all alternatives, and the same amount of non old forest stands (SECC and UR) would be converted to OFSS. You can't convert SECC + UR to old forest by logging (*) Either it's already old forest + stays that way or it's not + can't be turned into old forest by logging

Table 3-61 Acres Of Old Forest, Connective Corridors, and Potential Large Tree Removal Areas Affected By Proposed Harvest By Alternative

Measure (Acres)	Alternatives B and C	Alternative D
Old forest affected	1,010 - more changed to OFSS	430 - more = OFMS
Connective corridors affected	180	180
Cutting of trees > 21 inches DBH allowed	620	620
Other stand Structure converted to Old Forest	640	640

1010
430
580
1910

Table 3-62 Changes To Old Forest Stucture (Acres)

Old Forest Type	Existing	Change	Alts B/C/D Result
OFMS - Dry Forest	520	(-360)	160
OFSS - Dry forest	790	+600	1,390
OFMS - Moist Forest	600	+280	880
OFSS - Moist Forest	1,350	+120	1,470
Total Old Forest	**3,260**	**+640**	**3,900**

So why are these stands considered "dry" if the majority of trees are GF + DF? Scientific accuracy is in question here.

(*) In dry forest, thinning is proposed in 360 acres of OFMS in all action alternatives. These stands would be converted to OFSS. The majority of trees in these stands are dry grand fir and Douglas-fir, so thinning would not be of great benefit to wildlife species that prefer dry, open pine stands. Two small OFMS stands with large ponderosa pine would be converted to single story (22 acres). An additional 70 acres of dry OFSS would be thinned, resulting in open pine and Douglas-fir stands. These stands would remain classified as dry OFSS after treatment. Therefore, overall about 92 acres of dry pine forest with large trees would be treated to reduce fuels and enhance growth of ponderosa pine, which would benefit wildlife species favoring this types of habitat, such as white-headed woodpecker. (*) What is the rationale for converting GF/DF OFMS to OFSS? This seems like a net impact to associated wildlife.

Stand thinning outside of old forest would improve the health and resilience of stands that are overstocked and/or developing heavy fuels. Reduced stocking levels would decrease stress and associated insect and disease susceptibility on overstory trees that remain. Timber harvest prescriptions would tend to favor leaving early seral species such as ponderosa pine and western larch. This would likely result in more old forest in the long-term. (*) It's not scientifically accurate to convert all PAGS to "early seral species" such as PP + WL even when it was historically moister or cold mixed conifer dominated by GF, DF, possibly ES, etc. subalpine fir,

(*) No choices between alts re: connective corridors

In all action alternatives, canopy would be reduced in some of the connective corridors between old forest stands (180 acres) (Table 3-61). These areas would be thinned, but would remain fully stocked and would continue to provide for the free movement of various wildlife species.

Trees greater than or equal to 21 inches DBH

No trees >21 inches DBH would be removed in moist forest except for danger trees.

(*) Trees ≥ 21" dbh in dry forest are likely old growth + thus historically present, so you're removing OG GF because it is not a preferred timber industry tree.

(*) Trees > 21 inches DBH may be removed in any units proposed in dry forest. Trees > 21 inches DBH would most likely be removed in dry OFMS (360 acres) in order to create old forest single story (OFSS) (Table 3-62). The resulting cover type in these OFSS stands would be Douglas-fir, except for a 16 acre stand of ponderosa pine. Removal of grand fir in these stands would improve the vigor of remaining trees and promote long-term old forest conditions. Why? Impairment of natural OG habitat structure.

(*) So what would be the total # of trees removed ≥ 21" dbh + the impacts from this to wildlife? What is the rationale for this? Insufficient analysis of impacts

* There's no quantification of the number of trees ≥ 21" dbh that would be removed and no assessment of the impacts to wildlife, recreation, carbon storage, etc. this would cause.

Trees > 21 inches DBH could also be removed in other structural stage stands where necessary to achieve desired conditions, but this would be uncommon.

* How is it known that Forest Plan standards would be met for snags + downwood without quantifying how much present + future would be removed?

Other effects

All harvest units would maintain snags and down wood in excess of Forest Plan standards (see Chapter 2, Table 2-5). The healthiest large trees and the soundest large snags would remain as the building blocks for present and future stand and wildlife habitat development.

* We are opposed to the removal of any large trees + snags except for legitimate OSHA hazard tree removal.

Landscape prescribed fire is intended to reduce fuels, improve forage quality for big game, and lessen the impact of a future wildfire. Although efforts would be made to avoid overstory stands, individual tree and group torching would likely occur in areas where there are sufficient ladder fuels and high occurrences of mistletoe. If fire creeps into old forest, some tree mortality would be expected, and more snags would be created.

Proposed temporary roads would have a minimal impact to forest wildlife. All are along the edges of stands in open areas, and generally are short extensions of existing roads. Temporary roads would be re-vegetated after use. Since these roads would be closed to the public, access to old forest stands for activities such as firewood cutting would not increase.

Road maintenance, road and trail decommissioning, and removal of danger trees along roads would have little to no effect to old forest stands.

Proposed non-commercial thinning outside of timber harvest units would affect 100 acres of old forest, in several areas of less than 30 acres each. Only trees less than 10 inches DBH would be removed to reduce ladder fuels. This would slightly change the stand structure and wildlife habitat function of old forest in these areas, and result in healthier and potentially longer lasting old forest wildlife habitat.

Effects That Differ by Action Alternative

Direct/Indirect Effects - Alternatives B and C

No harvest would take place in moist OFMS because it is already below the historical range of variability (Table 3-63). Intermediate harvest is proposed in some of the largest patches of old forest. These are primarily OFSS stands in mixed conifer grand fir. Thinning in moist OFSS (580 acres) would not reduce large tree densities to the point that these stands would no longer be classified as old forest. *

* Drop all Moist forest OFSS logging & all dry forest OFSS logging. We question the "dry" characterization of the dry OFMS if the majority of the trees are GF + DF and thus want that dropped too.

Table 3-63 Acres Of Old Forest Treated By Type and Structure Class

Old Forest Type	Alternatives B and C	Alternative D
Dry Forest OFMS	360	360
Dry forest OFSS	70	70
Moist Forest OFMS	0	0
Moist Forest OFSS	580	0
Total Old Forest	1,010	430

Direct/Indirect Effects - Alternative D

No harvest would take place in either types of moist old forest (OFMS and OFSS). The approximately 580 acres of moist OFSS proposed for harvest in Alternatives B and C would not be treated in order to maintain cover and structure in stands adjacent to old forest and other key areas, thereby reducing fragmentation of forest canopy. No regeneration type harvest would occur in any structural stages in moist forest. There would be less intermediate harvest proposed in the largest patches of old forest, which are primarily old forest single story stands in mixed conifer grand fir.

Table 3-65 Forest Plan Standards and Existing Condition for Rocky Mountain elk

Management Area (Forested Acres)	Cover Type	Forest Plan Desired Condition	Forest Plan Standard	Existing Condition
MA C4 - Wildlife Habitat (17,000 acres)	Satisfactory	20%	15%	34%
	Total	NA	30%	48%
MA C3 – Big Game Winter Range (3,750 acres)	Satisfactory	15-20%	10%	17%
	Total	NA	30%	31%

Forage

Although past timber harvest may have provided short-term increases in elk forage, the amount and quality of forage is largely controlled by year to year weather (Wisdom et al. 2005). Other factors to consider in this project area include livestock grazing and invasive plants. The project planning area is within Asotin Allotment, for which 413 cow/calf pairs are permitted between June 15 to October 15, at a stocking rate of 18 acres/AUM. Monitoring indicates that forage utilization is within Forest Plan standards (Range Specialist Report). These utilization standards were calculated to provide forage for both livestock and big game. Once an area has reached full utilization, livestock must move out in order to reserve remaining forage for big game.

Several species of noxious weeds are found in the South George project planning area, including spotted and diffuse knapweed (Invasive Plant Report). Work is ongoing to monitor and control invasive weeds on the district, and so far these weeds have not spread to the point that forage resources are affected.

Roads

Roads influence habitat effectiveness by taking habitat out of production, reducing the effectiveness of cover, and increasing disturbance to elk and other wildlife. Elk have been found to select habitats preferentially based on increasing distance from open roads (Rowland et al. 2000). Vulnerability and hunting mortality have been found to be higher in forested stands with greater road densities and less hiding cover (Weber et al. 2000).

With existing closures, the open road density is 1.6 mi/mi^2 in MA-C4, and 0.8 mi/mi^2 in MA-C3. This is within the desired condition of an average of 2 miles per square mile or less, forest-wide (Forest Plan p. 4-11). About 4 miles of unauthorized roads have been identified, which are unplanned roads, abandoned travelway, and off-road vehicle tracks.

Decommission FR 4302 or enforce the closure re: ATVs

Although overall open road densities are low, one road in particular is affecting use by elk. The Hogback Road (FR 4302) was constructed through prime elk habitat at the heads of basins. This road is closed during hunting season, but because the road is easily accessed by ATVs behind the closure, unauthorized ATV use has progressively increased. Likely due to vehicle disturbance, a large number of the elk now congregate on Harlow Ridge in the summer, or remain on the Smoothing Iron winter range year round. This has led to an increase in landowner complaints (Pat Fowler, personal communication).

Habitat Effectiveness Index

The elk habitat effectiveness index model (HEI) is used to predict the influence of forest management activities on elk and other big game species. This model uses the distribution of cover and forage areas,

Avoiding logging in old forest also substantially benefits elk (as in alt. D) + Lynx + Pileated wood pecker + marten
We support all road closures, decommissioning, + not building temp. road proposed in alt C, which also benefit elk, wolves, & Lynx & any potential wolverine.

is due to the reduction in old forest treatments. Many old forest stands that would not be treated under this alternative also qualify as big game cover. This alternative would maintain more big game security cover and old forest while reducing fuels and improving forest stands on a smaller scale.

Roads

Alternative D would require the use of fewer roads for project activities, and less temporary road construction. Activities proposed for Alternative D would utilize about 70 miles of existing road, and approximately 2.25 miles of temporary road would be built. About 24.5 miles of the existing roads are closed. These roads would not be open to the public during project activities and would remain closed after the project is completed. The temporary roads would be decommissioned and vegetation would eventually grow back. Although this would cause some disturbance to elk and other wildlife, road use activities would be spread out in time and space.

Habitat Effectiveness Index

HEI values would be the same as in Alternative B because although less cover would be affected, the cover to forage spacing is slightly more effective in Alternatives B and C, according to the model.

Cover to forage ratio did not need to be part of habitat effectiveness index - when did this change? Scientific justification?

The following tables show comparisons of Elk cover and HEI by Alternative.

Table 3-67 Comparison of Effects to Elk Cover By Alternative (Percentage)

Management Area (Forested Acres)	Cover Type	Forest Plan Desired	Forest Plan Standard	Alt A (existing condition)	Alt B	Alt C	Alt D
MA C4 (17,000 acres)	Satisfactory	20	15	34	19	19	24
	Total	NA	30	48	39	39	46
MA C3 (3,750 acres)	Satisfactory	15-20	10	16	12	12	12
	Total	NA	30	31	31	31	31

Action alts would still move satisfactory cover away from Forest Plan desired conditions & closer to violation of Forest Plan standards.

Table 3-68 Forest Plan Habitat Effectiveness Index (HEI) Standards and Alternative Comparison

Management Area	Minimum Forest Plan Standard	Alt A (existing condition)	Alt B	Alt C	Alt D
C4 Wildlife Habitat	60	71	68	69	68
C3 Big Game Winter Range	70	80	77	77	77

Cumulative Effects – Alternatives B, C, and D

Cumulative effects are assessed at the South George project planning area scale because it is a large area and includes both summer and winter habitat. Ongoing projects in the area include previously planned landscape prescribed burning (4,500 acres), non-commercial thinning (1,500 acres), ongoing livestock grazing, and a proposal to protect springs from cattle.

(*) = Reasons for our concern re: impacts to American marten

utilize areas of high down wood densities, they would benefit from an increase in snags and down wood as stands mature.

Cumulative Effects – Alternative A

For the No Action alternative, South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present and reasonably forseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

Effects That Differ by Action Alternative

Direct/Indirect Effects – Alternatives B and C

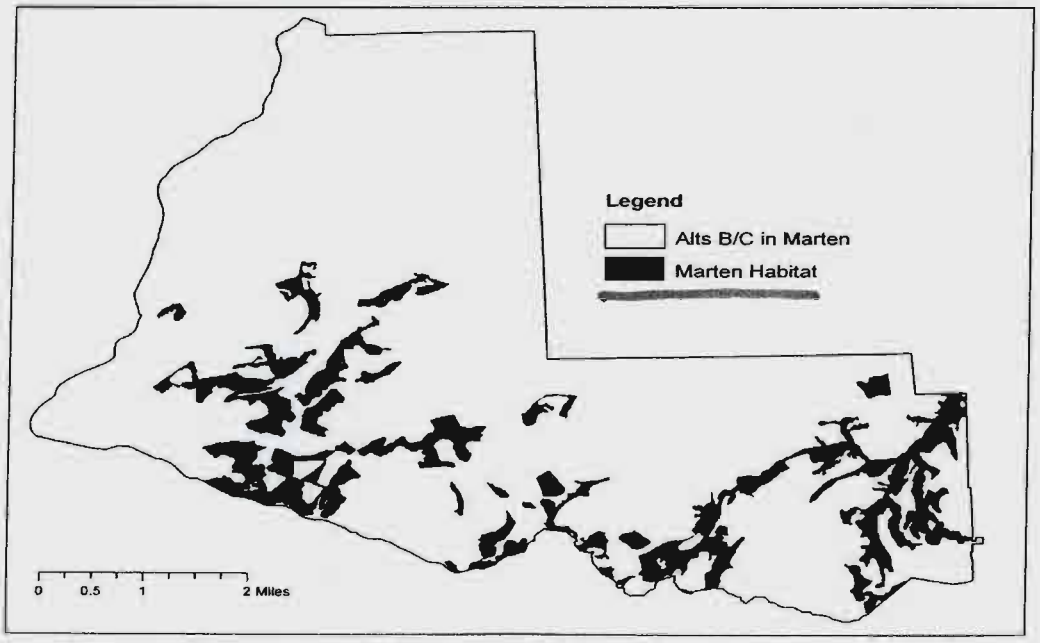
(*) Approximately 25 percent of available marten habitat in the planning area would be affected by harvest (735 acres). Trees > 21 inches DBH would not be removed in these areas, but modifications to the stand structure would make them unsuitable for marten denning in the short and mid-term. The majority of these stands would be thinned, and about 75 acres would have a regeneration type harvest.

(*) Most of the units affecting marten habitat are concentrated in the Hogback region, which could result in the loss of one of the major marten habitat areas in the project planning area (Figure 3-5). After harvest, remaining habitat in that area would occur in smaller blocks and would be less contiguous.

Landscape fire, non-commercial thinning, temporary roads, and danger tree removal would have very little or no effect to marten or their habitat.

Over 2,000 acres of marten habitat would not be affected by proposed activities.

Figure 3-5 Marten habitat and proposed harvest in the South George project planning area.



Have there been any population studies done for Marten in the project area or on the District?

Inadequate analysis - So how would loss of 259 of Marten habitat affect their viability in the project area? What are the cumulative effects to Marten of past, proposed & foreseeable future timber sales.

Cumulative Effects – Alternatives B and C

Cumulative effects are assessed at the project planning area scale because it is a large area that potentially could provide habitat for one or more reproducing female marten. Proposed activities in combination with other past, ongoing, and potential future projects are not expected to cause cumulative effects to marten or their habitat. Past timber harvest and road construction has occurred throughout the project planning area, which is reflected in the existing condition. Ongoing cattle grazing, non-commerical thinning projects, and weed treatments generally do not affect marten habitat. Forest recreation activities such as hunting, hiking, sightseeing, and berry picking take place during the day time when marten are less active. Open road densities would remain low, which restricts the amount of human disturbance.

(*) Why not? Past timber sales & loss of 259 of Marten habitat in project area w/ this project = cumulative impacts

Direct/Indirect Effects – Alternative D

Marten habitat would not be affected by harvest because no harvest would occur in moist old forest and no trees > 21 inches DBH would be removed in moist stands of any structure.

Cumulative Effects – Alternative D

There would be no cumulative effect from past, ongoing, or future foreseeable projects because Alternative D would not affect marten habitat.

Are you pretending you would never log there again?

FINDINGS OF CONSISTENCY

The overall direct, indirect, and cumulative effects would result in a small negative habitat trend for marten. Because the project impacts less than 1 percent (.007) of the marten habitat on the forest, the the amount of effect from this project is too small to cause changes to the population. South George project is consistent with the Forest Plan and thus continued viability of marten is expected on Umatilla National Forest.

(*) This de minimus argument does not work as there have been many such timber sales eliminating Marten habitat on the Forest and cumulatively they could cause Marten extirpation on the District - yet there have been no Marten surveys to establish current population size or establish viability thresholds.

The Forest Plan does not ensure viability of the Marten or other species & this also fails to take into account past violations of the Forest Plan & current proposed amendments to allow further violations rather than consistency with the Forest Plan.

AFFECTED ENVIRONMENT - Pileated woodpecker

Pileated woodpecker (*Dryocupus pileatus*) was selected as a management indicator species in the Forest Plan to represent dead and down tree habitat in mature and old growth mixed conifer stands (Table 3-64). Pileated woodpeckers are important because the large cavities that pileated woodpeckers create in trees provide nests for many of the larger secondary cavity nesters.

(*)

Two Dedicated Old Growth areas (C1) set aside for pileated woodpecker fall within South George project planning area. In general, Dedicated Old Growth areas are providing good habitat for pileated woodpecker. In 1992, biologists surveyed 100 Dedicated Old Growth areas in the Blue Mountains, including 20 on Umatilla National Forest (NF). All of the old growth areas surveyed on the Umatilla NF (100%) were occupied by pileated woodpecker at that time (Bull and Carter 1993). In more recent years, pileated woodpeckers have been incidentally observed in the South George planning area.

(*)

Yet the DEIS fails to mention that these DOGs (usually about 300 acres) are to small to support a pair (about 900 acres in ideal habitat conditions acc. Evelyn Bull) Mean home range size = 1,180 acres/pair

Pileated woodpecker are widely distributed in forested areas of eastern North America, westward across a large swath of forest in Canada, and then southward into Montana, Idaho, Washington, Oregon, and California (Nature Serve 2010).

The species is ranked as 'widespread, abundant, and secure' globally; more specifically in Oregon it is ranked as 'apparently secure' (Nature Serve 2010). The state of Washington lists pileated woodpecker as a 'priority' species. The PIF database (Partners in Flight 2011) indicates an increasing population and expect future ongoing stability.

(*) "Apparently secure" because no one has determined actual population numbers? Yet the FS has launched much larger landscape scale logging projects that intentionally eliminate denser forest habitat, down wood, large trees, large snags, in the name of "fuel reduction" threatening Pileated.

Yet if each pair of Pileated need about 1,000 acres (less than ideal habitat) this is only 200 pairs across the Forest - below viability thresholds for a population.

(*) Suitable environments for pileated woodpecker have declined slightly, but are broadly distributed and of high abundance on the Umatilla National Forest (Wales et al. 2011). Umatilla National Forest provides roughly 200,000 acres of pileated woodpecker source habitat. Source habitat is defined as those habitats contributing to long-term population persistence (Widsom et al. 2000). Overall there is little risk to pileated woodpecker viability (Wales et al. 2011).

This is the kind of forest mostly targeted for removal by So. George logging

(*) Pileated woodpeckers tend to prefer large blocks of grand fir and mixed conifer stands in multi strata forest with large diameter snags and down wood (Bull and Holthausen 1993). Approximately 90 percent of the diet of these birds consists of carpenter ants, which are associated with large standing and downed wood. Ponderosa pine, Douglas-fir and western larch were preferred species for foraging substrate (Bull and Holthausen 1993).

Pileated woodpeckers typically nest in tall, large diameter snags with broken tops and little remaining bark (Bull 1987). Within mixed conifer forest, pileated woodpeckers nested preferentially in ponderosa pine and western larch in northeast Oregon (Bull 1987, Nielsen-Pincus and Garton 2007). The majority of roost trees were hollow grand fir infected with Indian paint fungus and large ponderosa pine snags (Bull et al. 1992). Densities of nesting pairs of pileated woodpeckers were positively associated with the amount of late structural stage forest (Bull et al. 2007). (*) Late structural stage forest is largely absent compared to historical conditions, suggesting probable Pileated decline.

Pileated woodpecker habitat in South George project planning area is primarily closed canopy grand fir, Douglas-fir, and mixed conifer stands with a large tree component. A query of the vegetation data resulted in about 7,800 acres of pileated woodpecker foraging habitat, distributed throughout the project planning area. About half of that (4,000 acres) would have large enough trees to support pileated woodpecker reproduction. Therefore, South George project planning area contributes about 2 percent (4,000 acres) to the total source habitat on the forest.

(*) Mean home range size for paired birds in northeastern Oregon was 1,180 acres (Bull and Holthausen 1993), which would include both reproductive and foraging habitat. South George project planning area could reasonably support 4 to 6 pair of pileated woodpeckers.

The density of large snags (>20 inches DBH) was the best predictor of density of pileated woodpeckers (Bull and Holthausen 1993). An average of 8 snags per acre > 20 inches DBH were present at pileated woodpecker nest and roost sites in Eastside Mixed Conifer at the 50 percent tolerance level (DecAID Table EMC_S/L.sp-22 (Meilen-McLean et al. 2009)). Snags used for foraging, roosting, and nesting averaged 20, 28 and 30 inches DBH, respectively (DecAID Tables EMC_L.sp-17, 18, 19, & 25 (Meilen-McLean et al. 2009)).

(*) This density of large snags (4 to 12 per acre) occurs on about 16 percent of the moist upland forest snag analysis area (see snag section below, Figure W7). Areas of lower snag densities (greater than zero but less than 4 per acre) would likely be used as foraging areas. (Figures 3-9 and 3-11).

Most of the CVS snag data was collected in the 1990's in this area. Since that time, activity by Douglas-fir beetle, fir engraver, and other insects has been noted in the area (Silviculture Report, pp. 90 to 103), and has likely resulted in additional snags.

ENVIRONMENTAL CONSEQUENCES – Pileated woodpecker

Alternative A - No Action

Direct/Indirect Effects – Alternative A

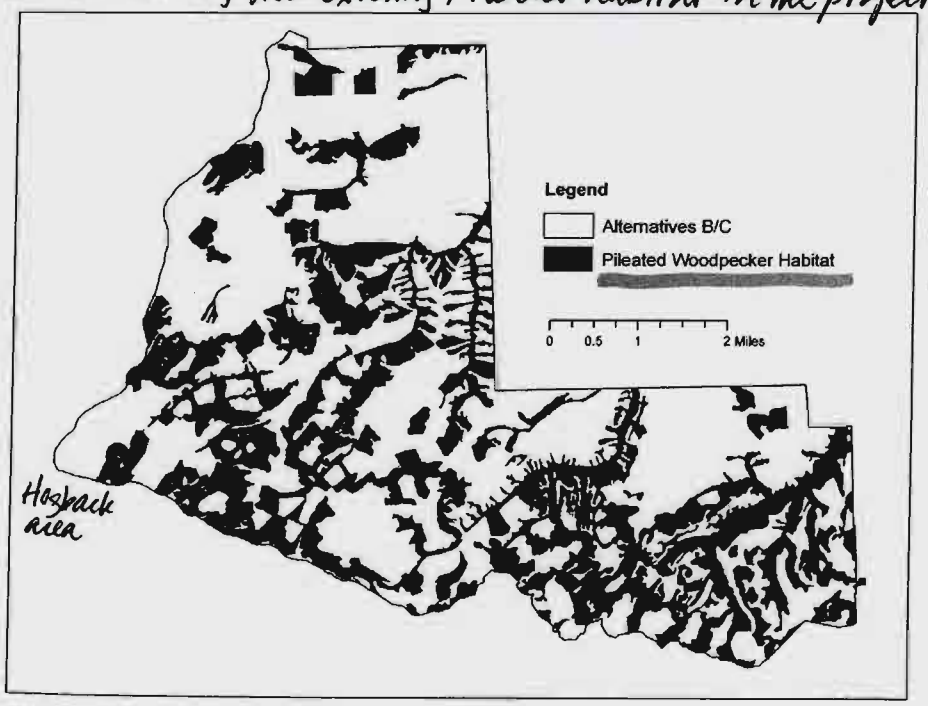
Under NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alterntative. This does not mean conditions on the ground will remain static, they will in fact, continue to change as disclosed below.

Existing pileated woodpecker habitat would remain in its current state in the short term. In the mid and long-term, more snags would be created as trees die. Stands that are not currently in an old forest condition could develop into mature stands, which would provide additional habitat.

Cumulative Effects – Alternative A

For the No Action alternative, the South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present and reasonably forseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

Figure 3-6. Pileated woodpecker habitat and proposed harvest in the South George project planning area. So alot of the existing Pileated habitat in the project area is proposed for logging - especially larger, more contiguous blocks important to species viability



These #s don't add up: 2,800 total habitat −1,295 = shelterwood, section ≥ 21" 1,505 acres left, not 2,200 acres of CT ≤ 21" dbh

675 620 1,295

* = reasons for our concern

Effects That Differ by Action Alternative

Direct/Indirect Effects – Alternatives B and C

* About 2,800 acres of existing pileated woodpecker habitat (36 percent of habitat in the project planning area) would be affected by timber harvest and fuels treatments. About 1,000 of these acres are potential nesting habitat.

* Some larger contiguous blocks of pileated woodpecker habitat would be broken up by harvest, particularly in the Hogback area (southwest portion of above map).

* Pileated need dense canopy → for protection from larger avian predators (hawks & owls), not more "sunlight on the forest floor." Pileated are not likely to use areas <60% canopy closure w/adequate security for reproduction & persistence

* Thinning in moist forest stands would retain all trees > 21 inches DBH in pileated habitat except for danger trees (2,200 acres). Many moist stands are even-age with little understory, and thinning would allow sunlight onto the forest floor so understory vegetation would develop. These areas would continue to be used by pileated woodpeckers, because the stands would be fully stocked, trees ≥ 21 inches DBH and snags would remain, and some would develop into multi-story stands.

* Shelterwood and seed tree harvest would remove approximately 675 acres of foraging and 16 acres of potential nesting habitat primarily in moist forest. This would be eliminating Pileated habitat

* In dry forest, removal of trees ≥ 21 inches DBH would be allowed (as needed to meet stand objectives) on 620 acres of pileated woodpecker foraging and nesting habitat, which could reduce potential nesting opportunities. Actual amounts would be less because numerous trees ≥ 21 inches DBH do not occur on every acre of these stands.

This is problematic as Pileated need adequate tree density, snag density, + down wood?

* Overall, stand thinning and fuels treatments would reduce tree density, snag density, and down wood abundance in the short and mid-term. There would likely be a decrease in snags but at least 3 large snags per acre in dry forest and 2 large snags per acre in moist forest would remain. In addition, all functioning snag habitat (broken top, signs of excavation, etc) would be retained wherever possible. Most trees and snags ≥ 21 inches DBH would be retained, as well as an adequate number of replacement trees for future snag development.

Other proposed activities such as landscape fire, non-commercial thinning, and constructing about 3 miles of temporary road would have no effect to pileated woodpeckers or their habitat.

* What is the quality, suitability, & continuity of remaining habitat compared to what would be lost?

The remaining 5,000 acres of pileated woodpecker habitat in the project planning area would not be affected by timber harvest and fuels reduction activities. In addition, over the long-term, thinned stands as well as other areas that currently do not quite qualify as habitat now would eventually develop into complex, mature stands and provide more pileated woodpecker habitat.

Cumulative Effects – Alternatives B and C

Cumulative effects are assessed at the project planning area scale because it is a large area that potentially could provide habitat for several pair of reproducing pileated woodpeckers.

* So why were there no cumulative effects identified for marten?

* Past fire suppression, salvage logging, and harvest in old growth forest has undoubtedly reduced the density of snags in the project planning area. This is reflected in the existing condition. However, insect related tree mortality is also occurring in the area, creating additional snags.

Personal firewood collection and roadside hazard tree removals would contribute to snag reductions, however the overall effects on pileated woodpecker habitat would be small because removal typically

(*) This does not take into account illegal firewood cutting, which could increase w/ planned logging & roading.

occurs only along open roads, and removal is limited to trees with less than 24 inches stump diameter.

Ongoing activities such as grazing, non-commercial thinning and weed treatments would have no effect to pileated woodpeckers or their habitat and therefore would not cause cumulative effects in combination with the proposed projects.

Inadequate analysis – How much would snags be reduced? Effects to Pileated?

When the expected effects from proposed activities are combined with residual, present, and foreseeable future actions in the analysis area, they would all add to past reductions in snag densities. Commercial harvest and prescribed buring would result in a minor incremental effect because new snags would also be created by prescribed burning. (*) So this begs the question of what would be the consequences to Pileated viability in the project area...

Direct/Indirect Effects – Alternative D

(*) Harvest and fuels treatments would affect approximately 1,300 acres of potential pileated woodpecker habitat. About 300 of these acres are primary nesting habitat. The overall effects to pileated woodpecker habitat would be less than half that of Alternatives B and C. However, the same number of trees > 21 inches DBH would be removed in dry forest as Alternative B.

(*) Inadequate range of alt.s - No action alt. would avoid eliminating Pileated + Marten habitats or avoid violating the existing Forest Plan & Eastside screens by logging in LOS under HRV & logging trees other than hazard trees ≥21" dbh. No action alt. would avoid virtual clearcutting (seed tree) No choice for those who want to avoid such impacts but who might favor road removal or other restoration.

(*) Seed tree harvest with reserves would remove approximately 80 acres of foraging habitat for pileated woodpecker.

The remaining 6,500 acres of potential pileated woodpecker habitat would not be affected by timber harvest and fuels reduction. In addition, in the long-term, thinned stands as well as other areas that currently do not quite qualify as habitat now would eventually develop into complex, mature stands and provide more pileated woodpecker habitat.

(*) Actually landscape fire & other fuel reduction removes down-wood used by Pileated & Marten.

Other proposed activities such as landscape fire, non-commercial thinning, and constructing about 2.25 miles of temporary road would have no effect to pileated woodpeckers or their habitat.

Cumulative Effects – Alternative D

Cumulative effects are the same as Alternative B. (*) This does not account for cumulative effects and uncertainty as to actual Pileated population #s in the project area.

FINDINGS OF CONSISTENCY

The overall direct, indirect and cumulative effects would result in a small negative habitat trend for pileated woodpecker. Because the project impacts one percent or less of the pileated woodpecker habitat on the forest, the amount of effect from this project is too small to cause changes to the population. South George project is consistent with the Forest Plan and thus continued viability of pileated woodpecker is expected on the Umatilla National Forest. (*) Again, the Forest Plan does not ensure species viability & is being violated, not met w/ consistency-amendments allow violations.

AFFECTED ENVIRONMENT - American Three-toed Woodpecker

American three-toed woodpecker (*Picoides dorsalis*) (formerly known as the northern three-toed woodpecker) was selected as a management indicator species in the Forest Plan to represent dead and down tree habitat in mature and old growth lodgepole pine stands (Table 3-64). They primarily eat the larvae of mountain pine beetles in lodgepole pine and tend to prefer recently dead trees (Imbeau and Desrochers 2002). ~~Actually they also forage in Grand fir, Ponderosa pine, spruce, etc.~~

The three-toed woodpecker is a year-round resident throughout forested regions of Canada and Alaska, south into the northern New England states, Minnesota and Michigan, and south into Washington, Oregon, Idaho, and Montana, the Black Hills of South Dakota, Wyoming, Utah, Colorado, eastern Nevada, central Arizona, and southern New Mexico (Nature Serve 2010).

(*) Actually this is not accurate?

The global status of three-toed woodpecker is 'secure' due to it's wide distribution, but considered 'vulnerable' in Oregon and Washington (Nature Serve 2010). The Umatilla forest has very few records for three-toed woodpeckers, and none in the South George planning area. Have there been any population surveys for Am. Three-toed in the planning area? If not, it can't be assumed they don't exist there.

Three-toed woodpecker distribution can be patchy and may change frequently as they follow in the path of insects outbreaks, making it very difficult to determine population trends. North American Breeding Bird Survey (BBS) data for 1980–1998 indicate a significant annual decrease in populations across the species' range in North America, however, this data should be viewed with caution given the low number of routes and low abundance of three-toed woodpeckers per route (Leonard 2001).

Potential habitat for three-toed woodpeckers in South George project planning area was identified by querying the vegetation database for dense, moist mixed conifer, spruce, subalpine fir, and lodgepole pine. Query results indicate that there are about 7,000 acres of potential foraging habitat for three-toed woodpeckers in the project planning area. Habitat is well-distributed and well-connected throughout the planning area.

Current estimates indicate there are 170,000 acres of three-toed woodpecker habitat on the forest (Wales, personal communication). South George project planning area contributes about 4 percent to the forest-wide habitat for three-toed woodpeckers.

Three-toed woodpecker nests are preferentially created in mature trees with heart rot (Goggans et al. 1988), and it is suggested that 500 acres of mature/overmature lodgepole pine may be needed per pair of birds. Virtually all of the possible three-toed woodpecker nesting habitat in South George project planning area is fir and spruce rather than lodgepole pine. In general, the southern end of the Umatilla National Forest has more lodgepole pine habitat, and likely provides the majority of the forest's three-toed woodpecker nesting habitat. However, several recent large fires have also created vast foraging areas about 10 miles to the west of South George project planning area (e.g. School and Columbia Complex). With about 2,800 acres of old forest in spruce and fir in the project planning area, a rough estimate based on the above factors is that there may be enough nesting habitat for 3 to 5 pair of three-toed woodpeckers.

ENVIRONMENTAL CONSEQUENCES – Three-toed woodpecker

Alternative A - No Action

Direct/Indirect Effects – Alternative A

Under NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alternative. This does not mean conditions on the ground would remain static, they would in fact, continue to change as disclosed below.

Existing three-toed woodpecker habitat would remain in its current state in the short-term. There may be increases in insect outbreaks, which would benefit three-toed woodpecker.

Cumulative Effects – Alternative A

For the No Action alternative, the South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present and reasonably foreseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

(*) Reasons for our concern re: American Three-toed re: impacts from logging

Effects That Differ by Action Alternative

Direct/Indirect Effects – Alternatives B and C

(*) About 2,530 acres foraging habitat (36 percent of habitat in the project planning area) and about 540 acres of possible nesting habitat (19 percent) would be affected by timber harvest and fuels treatments. No regeneration harvest is proposed in these stands. Stand thinning and fuels treatments would reduce tree density, snag density, and down wood abundance. Treatments would likely result in less potential for insect disturbances that three-toed woodpeckers depend upon in the short and mid-term.

(*) No lodgepole pine cover types would be affected, but possible nesting opportunities in spruce and fir stands would be reduced by about 19 percent in the project planning area.

The remaining 4,470 acres of potential three-toed woodpecker habitat would not be affected by timber harvest and fuels reduction, and would continue to provide foraging and nesting opportunities.

Other proposed activities such as landscape fire, non-commercial thinning, and constructing about 3 miles of temporary road (Alternative B only) would have no effect to three-toed woodpeckers or their habitat.

Cumulative Effects – Alternatives B and C

Cumulative effects are assessed at the South George project planning area scale because it is a large area that potentially could provide habitat for one or more pair of reproducing three-toed woodpeckers. Past fire suppression, salvage logging, and harvest in old growth forest has undoubtedly reduced the amount of three-toed woodpecker habitat in the project planning area. Past timber harvest is reflected in the existing condition. Cumulatively the effects of proposed activities in combination with other past, ongoing, and potential future projects are not expected to have lasting negative impacts to three-toed woodpecker populations. There is little to no old forest lodgepole pine nesting habitat in this area. In addition, recent large fires on the forest (e.g. School and Columbia Complex) have created large amounts of habitat elsewhere on the forest.

Ongoing cattle grazing, non-commercial thinning projects, and weed treatments, and recreation activities do not affect woodpecker habitat.

FINDINGS OF CONSISTENCY – Alternatives B and C

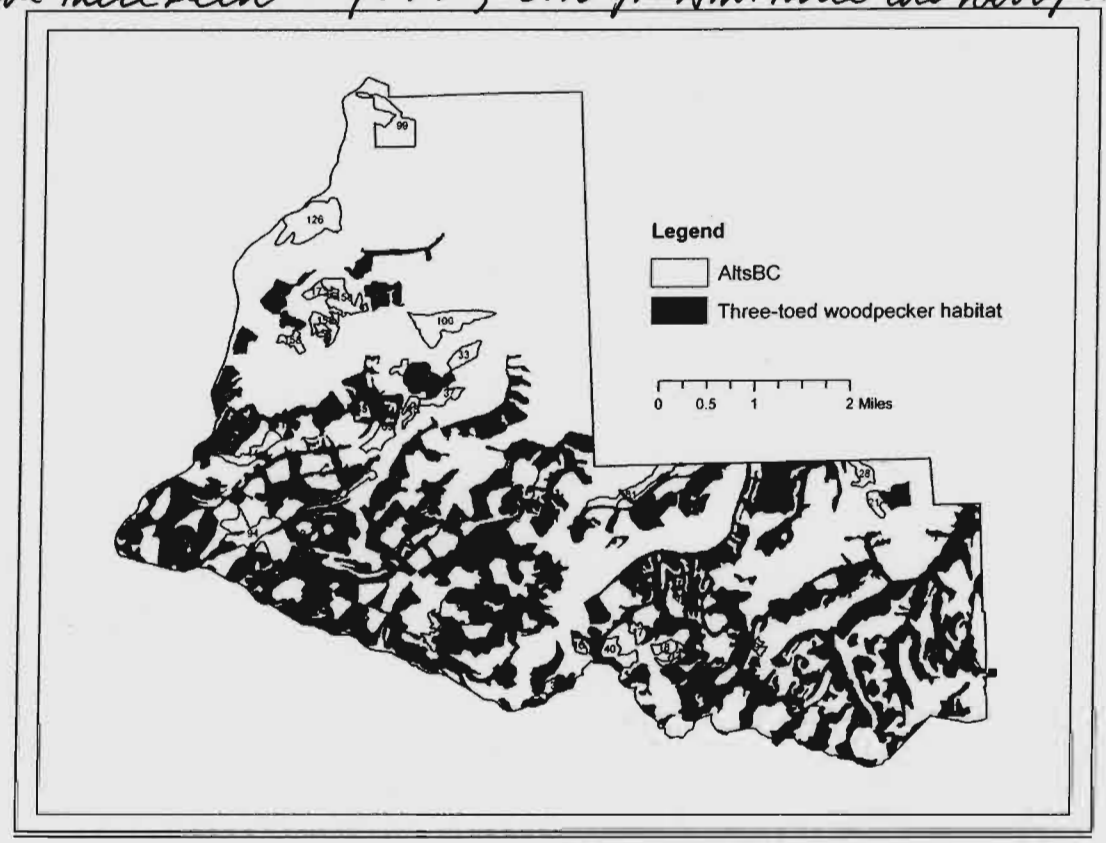
The overall direct, indirect and cumulative effects would result in a very small negative habitat trend for three-toed woodpecker. Because the proposed activities affect less than 2 percent of the three-toed woodpecker habitat on the forest, the amount of effect from this project is too small to cause changes to the population. The project is consistent with the Forest Plan and thus continued viability of three-toed woodpecker is expected on the Umatilla National Forest. The Forest Plan (+ its violation) don't ensure viability.

(*) Without population surveys, there is no way of assessing the significance of this "very small" negative habitat trend for the American Three toed woodpecker. Based on planned logging - how many pairs could be eliminated due to loss of habitat out of the total # of possible pairs in the project area (only 3-5 pairs)? This should be calculable based on information in the DEIS and GIS layers. Loss of 36% of their habitat and 19% of nesting habitat in the project area could cause loss of how many pairs? 1-2 out of 3-5 pairs of a declining species? At what point does the Forest have to protect its MIS from extirpation?

(N→S, E→W)
* Look for Three toed woodpeckers in units: 27, 17, 158, 99, 26, 41, 36, 35, 69(N), 66, 35, 31, 18, 25, 35, 73, 74, 19, 82, 94(S), 93, 49(S), 50, 31, 138, 51, 29, 25, 24, 10, 29, 13, 65, 55, 46, 154, 99, 154, 44, 34, 21, 19, 37, 18, 48, 46, 40, 5, 66, 25, 24, 28, 38, 54, 16, 22, 12, 18, 20, 29, 15, 25, 37, 27, 31, 34, 3 - i.e. most of the sale units

Figure 3-7 Three-toed woodpecker habitat and proposed harvest in the South George project planning area.

(*) Have there been any surveys done for Am. Three-toed woodpeckers?



Alternative D

Direct/Indirect Effects – Alternative D

Approximately 1,250 acres of northern three-toed woodpecker habitat would be affected by timber harvest and fuels reduction (18 percent of available habitat). No likely nesting areas would be affected.

(*) 2 large snags per acre is likely woefully short of what the Am. Three-toed woodpecker needs for suitable habitat.

Stand thinning and fuels treatments would reduce tree density, snag density, and down wood abundance. (*) A minimum of 2 large snags per acre would be retained in units within three-toed woodpecker habitat. In addition, all functioning snag habitat (broken top, signs of excavation, etc) would be retained wherever possible. These areas may not be used by three-toed woodpecker in the short term due to the reduction in canopy, but they would likely become suitable again over the mid and long-term.

The remaining 5,750 acres of foraging habitat, of which 2,800 acres also provide nesting opportunities would be unaffected. Other proposed activities such as landscape fire, non-commercial thinning, and building 2.25 miles of temporary road would have no effect to three-toed woodpeckers or their habitat.

Cumulative Effects – Alternative D

Cumulative effects are the same as Alternatives B and C.

FINDINGS OF CONSISTENCY – Alternative D

The overall direct, indirect and cumulative effects would result in a very small negative habitat trend for three-toed woodpecker. Because the proposed activities effect less than 1 percent (.009) of the three-toed woodpecker habitat on the forest, the amount of effect from this alternative is too small to cause changes to the population. The project is consistent with the Forest Plan and thus continued viability of three-toed woodpecker is expected on the Umatilla National Forest. Again, the Forest Plan in itself does not ensure species viability.

(*) This is species reasoning re: cumulative effects for finding "too small" effect to cause changes to the population.

AFFECTED ENVIRONMENT - Primary Cavity Excavators (Snag Habitat)

(*) Primary cavity excavators as a group were selected to represent dead/down tree (snag) habitat that a vast array of vertebrate species depend on for reproduction and/or foraging (Table 3-64). Primary cavity excavators create holes for nesting or roosting in live, dead or decaying trees. Secondary cavity users such as owls, bluebirds, and flying squirrels may use these cavities later for denning, roosting, and nesting.

Habitat for primary cavity excavators includes coniferous and hardwood stands in a variety of structural stages and the availability of dead trees in various size and decay classes (Thomas 1979). Primary habitat generally contains snags greater than 15 inches DBH, while smaller sizes provide secondary habitat.

Snag habitat in South George project planning area is variable with most available in areas of light or no management activities, and less in areas of intensive management. Areas with low snag densities are due to past fire suppression, timber salvage, and an inadequate number retained or loss of snags and replacements in previously harvested units. In other areas, insect and disease activity, drought, and overstory mortality due to high stand densities have created new snags and down wood.

(*) Snag densities are similar to reference values for what?

(*) Forest wide, snag densities are similar to reference values (Mason and Countryman 2010). This would indicate that overall available snag habitat is contributing to viable populations of primary cavity excavators. DecAid was not intended by its authors to determine the viability of species.

Misuse of science:

A snag analysis is used to evaluate habitat for primary cavity excavators in the affected watersheds. Snag habitat was assessed using the Current Vegetation Survey (CVS) data collected in the Asotin watershed. CVS inventories (Brown 2003) are permanent plots on a 1.7-mile grid that sample the vegetative condition on Forest Service land. The historical range of variability in South George project planning area (Silviculture Report, pp. 34-37) is also used as a frame of reference.

Snag Analysis

(*) The Decayed Wood Advisor (DecAID) by Mellen-McLean et al. (2009) was used to compare dead wood availability in the South George snag analysis area to a reference condition. The Decayed Wood Advisor (DecAID) is a synthesis of published scientific literature, research data, wildlife databases, forest vegetation databases, and expert judgment and experience. DecAID is not a mathematical model or wildlife/wood-decay simulator, and does not suggest snag retention levels for individual harvest units.

While a wide range of snag densities are present in the project area and the snag analysis area, the average snag densities in the affected watersheds exceed Forest Plan minimum standards (Table 3-69). This would indicate that the snag analysis area contains adequate structural habitat features desired by a number of primary cavity excavating species and other wildlife. Cold upland forest is not represented in the data because it makes up less than one percent of the analysis area.

(*) Actually the existing Forest Plan requires that far fewer snags be retained than are actually used + needed by primary cavity excavators.

Table 3-69 Forest Plan Standards and Existing Conditions for Snag Density in Asotin Watershed

Umatilla Forest Plan Standards			Existing Condition, Asotin Watershed		
Working Group	Diameter Class (inches DBH)	Average Snag Density (#/acre)	Potential Vegetation Group	Diameter Class (inches DBH)	Average Snag Density (#/acre)
Ponderosa Pine	≥ 10	2.25	Dry Upland Forest	≥ 10	4.5
	≥ 20	0.14		≥ 20	1.1
Mixed Conifer (South Associated)	≥ 10	2.25	Moist Upland Forest	≥ 10	18.7
	≥ 20	0.14		≥ 20	3
Lodgepole Pine / Subalpine Zone	≥ 10	1.80	Cold Upland Forest	≥ 10	no data
	≥ 20	No standard		≥ 20	no data

The Forest Plan established minimum standards for snag density based on the population requirements of species associated with snags. These biological potential models are now considered to be a flawed technique for determining snag retention needs (Rose et al. 2001). In light of this, the South George project would leave more snags than required in the Forest Plan.

The Forest Plan minimum standard is 0.14 snags > 20 inches DBH per acre, with additional smaller DBH snags to total 2.25 per acre. In this project, at least 3 large snags (> 20 inches DBH) per acre would be retained in dry forest units and at least 2 large snags per acre would be retained in moist forest. In addition, all functioning snag habitat (broken top, signs of excavation, etc) would be retained wherever possible. Why fewer large snags per acre for moist forest? Moist forest is usually more productive, resulting in more large snags.

CVS plots in the Asotin watershed can also be compared to CVS snag data in DecAID that was collected from unharvested areas over the entire Blue Mountains. Although the data from unharvested areas may not accurately reflect "pre-settlement" or "natural" conditions in eastside forests due to years of fire exclusion (Mellen et al. 2006), it is comparable to other estimates of historical dead wood densities (Harrod et al. 1998, Agee 2002, Ohmann and Waddell 2002). – which may be similarly flawed?

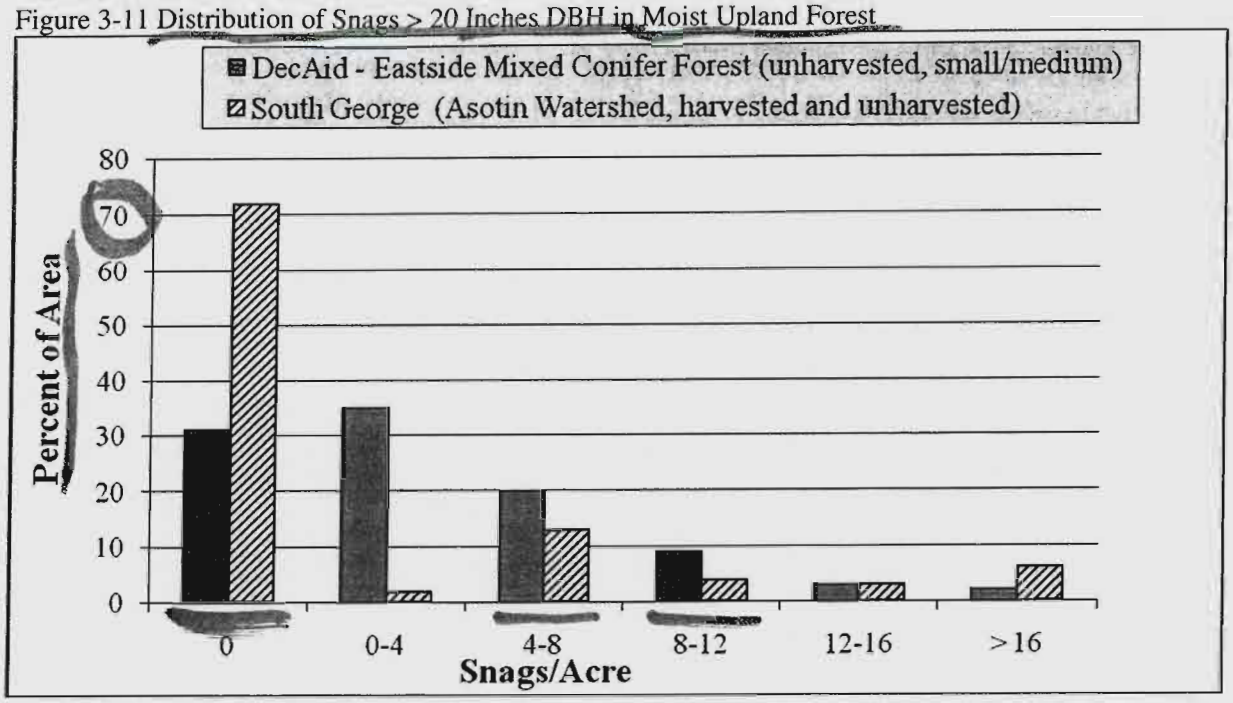
(*) So why is the FS planning to log out more trees ≧21" dbh in dry forest, thus contributing to the future deficit in large snags?

Dry Upland Forest - In dry upland forest, the amount of forest land in Asotin Watershed with 0 snags per acre is relatively close to reference conditions (Figures 3-8 and 3-9). About 65 percent of reference plots in unharvested areas had 0 snags per acre in the > 10 inch DBH class, and about 80 percent had 0 snags per acre in the > 20 inch DBH class. Plots from Asotin watershed in harvested and unharvested areas showed similar results.

However, the amount of dry forest with more than zero (0) but less than 8 snags per acre is also about 50 percent below what would be expected under natural conditions. There are areas with higher snag densities than reference conditions on a small percentage of the dry forest in the Asotin watershed, which likely reflects patchy past insect and disease infestations that occurred in the 1980s and early 1990s.

Over 70% of the area of moist mixed conifer forest has no snags > 20" dbh!

Figure 3-11 Distribution of Snags > 20 Inches DBH in Moist Upland Forest



ENVIRONMENTAL CONSEQUENCES – Cavity Excavator Habitat

Alternative A - No Action

Direct/Indirect Effects – Alternative A

Under NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alterntative. This does not mean conditions on the ground will remain static, they will in fact, continue to change as disclosed below.

The area would continue to provide snags and large down wood for cavity dependent species. Additional snags and large down wood would be created as overstory mortality occurs and dead trees eventually fall, creating new foraging and nesting habitat. Population numbers would likely increase with the additional nesting and foraging habitat. Stands would continue to develop old growth habitat characteristics (large trees, large snags, down wood, multi strata canopy) over the long-term.

Ongoing and potential increases in disease and insect occurrence could improve habitat by creating foraging and nesting habitat (dead wood). There is an increased risk of wildfire that could reduce nesting habitat for some species, but other woodpecker species would respond positively. The black-backed woodpecker and Lewis' woodpecker would benefit in the short and mid-term, due to their preference for burned stands. Most other woodpeckers would respond to fire by shifting their use to adjacent unburned or lightly burned stands. If continuous fuels buildup leads to an uncharacteristically large, severe wildfire, it would take over 100 years to regain mature forest cover with sufficient quantities of snags.

(*) = Reasons for our concern re: impacts to primary and secondary cavity nesters & excavators

(*) We are opposed to the removal of any snags ≥15" dbh except OSHA hazard snags and to removal or burning consumption or "mastication" of any large down wood.

Cumulative Effects – Alternative A

For the No Action alternative, the South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present and reasonably forseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

Effects Common to All Action Alternatives

(*) Define "fully stocked" – obviously thinned stands would not be "stocked" at 100% of potential density – What basal area for dry + moist forest types is considered "fully stocked"? This is a timber industry concept not an ecological condition.

Direct/Indirect Effects - Alternatives B, C and D

(*) Tree thinning would reduce the density of green trees that might otherwise become future snags; however these stands would remain fully stocked after treatment and would meet green tree replacement objectives. Fuels treatments would remove some existing dead and down wood habitat in order to reduce the fuel loading in strategic areas. Danger tree removal would also reduce standing dead trees within units and along haul routes. Harvest may also decrease nesting and foraging habitat due to the reduction of dead and down wood habitat. However, most trees and snags ≥ 21 inches DBH would be retained, as well as an adequate number of replacement trees for future snag development.

(*) What is the rationale for further depleting snag #s & removing large snags?

Although snag numbers would decline in harvest units, the amount of area with zero snags per acre would not increase because at least 2 large snags per acre would be retained in grand fir and subalpine fir stands, and 3 per acre in ponderosa pine and mixed conifer stands. If large snags are not available, snags between 10 and 19 inches would be substituted. In addition, all functioning snag habitat (broken top, signs of excavation, etc) would be retained wherever possible. (*) Snags without these characteristics may also be or become functioning snag habitat.

(*) These are unnaturally low & insufficient #s of snags retained

In general, managing forests within or towards the historical range of variability should provide habitat for a wide range of cavity excavator species. Snags within harvest units would be retained above the minimum levels required in the Forest Plan. The number of acres with 2-4 snags per acre would increase and be more in line with reference conditions (Figure 3-8).

(*) How would you increase acres w/ 2-4 snags? By cutting down snags above 4 per acre?

A minimum of 3-6 down logs per acre (in dry plant association) or 15-20 down logs per acre (in moist plant association) would be retained to meet Forest Plan standards as amended. A minimum of 16 green trees per acre would be left for future snag development. Most thinning units would exceed this number. Some stands slated for regeneration type harvest do not have enough green trees to fulfill this requirement, in which case more snags would be retained than usual.

(*) Prescribed fire can cause high snag losses, especially if there has been a long fire-free period (Bagne et al. 2007). Slash from harvest within units will not be piled against snags to help reduce this effect. Landscape burning could also provide new snags where fire creeps into forested areas.

Effects That Differ by Action Alternative (*) Inadequate analysis:

Direct/Indirect Effects - Alternatives B and C

(*) Cavity excavator habitats would be affected by a reduction in snags and down wood on 4,150 acres, or 27 percent of the forested stands in the planning area. Snags would also be reduced through danger tree removal along about 80 miles of roads. This in turn would reduce habitat for cavity excavator species as well as other species that use the cavities they make.

(*) So where is the analysis as to impacts from snag reduction on specific primary cavity excavator species & specific secondary cavity user species? What are these MIS species' current population numbers & viability thresholds in the planning area? Have population surveys been done for these Management Indicator species?

*Reasons for our concerns re: likely impacts to primary cavity excavators & secondary cavity users.

*There are already deficient numbers of snags ≥ 21" dbh, so it is not reassuring that only "most" (unquantified) would be retained. How many would be removed?

Most trees and snags ≥ 21 inches DBH would be retained, as well as an adequate number of replacement trees for future snag development. Some trees > 21 inches DBH would be removed in dry forest. Trees ≥ 21 inches DBH in moist forest would only be removed if they pose a danger to workers or are identified as danger trees along roads. *or 70 So-called "Danger" (hazard) tree removal along 80* miles of roads is excessive and needs to be quantified & analyzed for its effects to snag-dependent species.

Direct/Indirect Effects - Alternative D

Cavity excavator habitats would be affected by a reduction in snags and down wood on 2,900 acres, or 19 percent of the forested stands in the planning area. Snags would also be reduced through danger tree removal along about 70 miles of roads. This in turn would reduce habitat for cavity excavator species as well as other species that use the cavities they make.

Most trees and snags ≥ 21 inches DBH would be retained, as well as an adequate number of replacement trees for future snag development. Some trees > 21 inches DBH would be removed in dry forest. Trees ≥ 21 inches DBH in moist forest would only be removed if they pose a danger to workers or are danger trees along roads. *So what would be the direct & indirect effects to snag-dependent species? Inadequate analysis.

Cumulative Effects - Alternatives B, C, and D

Cumulative effects are assessed at the Asotin watershed scale to be consistent with the snag analysis area. Past fire suppression, salvage logging, and harvest in old growth forest has undoubtedly reduced the density of snags in South George project planning area. This is reflected in the existing condition. Recent insect related tree mortality is occurring in the area, creating additional snags.

The Eastside prescribed burn could create some snags where fire creeps into forested areas. Personal firewood collection can contribute to snag reductions, however the overall effects on snag dependent wildlife would be small because removal typically occurs along open roads. Other ongoing and proposed activities such as non-commercial thinning, weed treatments and spring protection would have no cumulative effect to dead wood habitat and woodpeckers. *This is inadequate cumulative effects analysis - see below.

When the expected effects from proposed activities are combined with residual, present, and foreseeable future actions in the analysis area, they would all add to past reductions in snag densities. Commercial harvest and prescribed burning would result in a minor incremental effect because new snags would also be created by prescribed burning. Structural habitat for cavity excavating birds would be reduced at the stand scale, but watershed averages would remain relatively constant or become more in line with historical distributions. *There is no quantification of losses of snags versus gain of more snags immediately or over time to justify this conclusion. (See wavy line ~)

FINDINGS OF CONSISTENCY

The project would affect less than 1 percent (.006) of the forested land on the Umatilla National Forest. The overall direct, indirect, and cumulative effects would result in a small negative habitat trend for primary cavity excavators. The amount of effect from this project is too small to cause changes to cavity excavator populations. Therefore the project is consistent with the Forest Plan and continued viability of primary cavity excavators is expected on Umatilla National Forest. *How is continued viability "expected" with no quantification of snag losses, no quantification of PCE population numbers, & no analysis of effects from snag reduction to PCE population numbers & viability?!

*Terms like "minor" & "too small" must be defined.

AFFECTED ENVIRONMENT - Northern Goshawk

The northern goshawk is not a management indicator species in the Forest Plan, and is not federally listed as Threatened, Endangered, or Sensitive. However, the Forest Plan as amended (Regional Forester's Eastside Forest Plan Amendment 2) provides for specific protections for goshawk nesting territories (USFS 1995). Northern goshawk is considered 'sensitive-critical' by the state of Oregon.

Northern goshawk are considered a habitat generalist at large spatial scales, however it typically nests in a narrow range of structural conditions (Squires and Kennedy 2006). Goshawks prefer mature forest with large trees, and relatively closed canopy with an open understory for nesting. Nests are frequently found near the lower portion of moderate slopes and near water.

A study in the Blue Mountains found that structural stage, tree basal area, and low topographic position reliably discriminated between nests and random sites. Positive correlations were found between fledging rate and tree basal area within 1 ha of the nest (McGrath, et al. 2003).

A query of vegetation data for areas with at least 50 percent tree cover and the presence of large diamter trees resulted in approximately 4,700 acres of potential goshawk nesting habitat. These stands are well distributed throughout most of the planning area. Quality nesting habitat would typically be within one-quarter (1/4) mile of water, in the lower portion of the slope, and often on the north facing slope.

(*) Whenever these goshawk surveys, when were they, & how thorough were they?

Goshawk surveys were conducted in potential nesting habitat that could be affected by proposed project activites. No goshawks were detected. If active nests are found at any time, they would be protected as specified in the project design criteria (see Chapter 2, Table 2-5).

ENVIRONMENTAL CONSEQUENCES – Northern Goshawk

Alternative A - No Action

Direct/Indirect Effects – Alternative A

Under NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alternative. This does not mean conditions on the ground will remain static, they will in fact, continue to change as disclosed below.

In the mid and-long term, some stands would continue to grow and develop multiple dense canopy layers. In the long-term, young stands would develop large trees and openings created by past harvest would fill in. The availability of nesting habitat would increase in the long-term due to a greater abundance of large trees and dense multi-layered habitat, while foraging areas with open understory would be reduced. The availability and distribution of goshawk nesting and foraging would likely return to a more natural balance. However with continued fire suppression, the susceptibility of stands to high severity wildfires and insect or disease outbreaks would likely increase and could lead to large losses of habitat long-term.

Cumulative Effects – Alternative A

For the No Action alternative, the South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present and reasonably foreseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

Effects Common to All Action Alternatives

Direct/Indirect Effects - Alternatives B and C

Timber harvest and fuels treatments follow the Eastside Screens requirements (Forest Plan Amendment # 11) to maintain late old structure stands and connectivity corridors. The intent is to provide short term protections for species dependent on old forest such as northern goshawk. Areas that could not meet these requirements were dropped from consideration during project planning. (See Appendix C-Consistency with Eastside Screens).

No planned logging & fuel reduction does not maintain LOS stands & connectivity corridors! Amendments to allow violation of forest plan standards do equate not w/ consistency w/ the forest plan!

Yet logging of LOS below HRV, all forest in general & trees ≥ 21" dbh & connectivity corridors is planned...

(*) supports our concerns

Fuels treatments would reduce high down wood and snag densities to reduce fuel loading and make stands more resilient to wildfire. Potential goshawk prey associated with these habitat features may be less abundant following treatment. Untreated areas within units such as riparian habitats would continue to provide well distributed habitat with unaffected prey abundance similar to pre-treatment stands. Treatment units, which would maintain snag densities in excess of Forest Plan standards and down wood densities that meet Forest Plan standards, would also provide some level of structural complexity that would provide for potential prey.

If active nests are found at any time, they would be protected as specified in the project design criteria (Chapter 2, Table 2-5).

Landscape fire, spring protection, non-commercial thinning, and constructing up to approximately 3 miles of temporary road would have very little or no effect to northern goshawk or their habitat.

Effects That Differ by Action Alternative

Direct/Indirect Effects - Alternatives B and C

(*) Proposed activities would affect about 1,700 acres of the potential goshawk habitat in the South George project planning area. Commercial tree thinning and post-harvest fuel treatments would affect about 1,350 acres and regeneration type harvest would affect about 350 acres. Some large blocks of goshawk habitat in the west half of the planning area would be heavily impacted. Approximately 3,000 acres of potential goshawk habitat in the project planning area would not be affected.

About 1,350 acres of treatments would occur in moist forest and about 350 acres in dry forest. In moist forest, all trees > 21 inches DBH would be retained except for danger trees. At least 500 acres of moist forest treatments in goshawk habitat would remain classified as moist old forest, which would indicate that these stands may remain suitable for nesting.

(*) What is the ecological rationale for removing trees ≧ 21" dbh in dry forest?

In dry forest, trees > 21 inches DBH may be removed. Some stands may remain suitable for nesting if clusters of large trees remain.

Cumulative Effects - Alternatives B and C

(*) Cumulative effects are assessed at the South George project planning area scale because it is large enough to potentially support several goshawk nesting territories. The alteration of 1,700 acres of potential nesting habitat would add slightly to past changes in goshawk habitat, which is reflected in the existing condition. However 3,000 acres of nesting habitat would remain. Past, present, and reasonably foreseeable activities in the area such as cattle grazing, non-commercial thinning, and recreational use in combination with proposed projects would not cause cumulative effects to northern goshawk. If active nests are found at any time, they would be protected as specified in the project design criteria (Chapter 2, Table 2-5).

Direct/Indirect Effects - Alternative D

Harvest and fuels reduction would have a much smaller effect to goshawk nesting habitat because there would be no reduction of old forest stands in the moist biophysical environment. Thinning would affect about 230 acres of potential goshawk nesting habitat. In moist forest, all trees > 21 inches DBH would be retained except for danger trees, but in dry forest, trees > 21 inches DBH may be removed. This alternative would therefore retain more large trees for goshawk nesting than Alternatives B or C.

Approximately 4,500 acres of potential goshawk habitat in the project planning area would not be affected.

(*) We are concerned that planned logging & fuel reduction will hurt: White-headed woodpeckers, Flammulated owls & Lewis' woodpeckers re: dry forests

(*) So it doesn't help Whitehead woodpecker, & Lewis' woodpecker to be planning to remove dry forest LOS & trees ≧21" dbh by logging, nor Flammulated owl by removing density.

Currently there are about 300 acres of single strata, large diameter ponderosa pine stands in the project planning area. There are about 1,700 acres of the ponderosa pine cover type, so the capacity is there for more. Habitat for white-headed woodpecker, flammulated owl, and Lewis' woodpecker is currently very limited in the planning area.

There's no ecologically sound reason to remove trees ≧21" dbh*, LOS, or to clearcut & virtually clearcut.

Mesic Mixed Conifer Habitat

So why is moister mixed conifer targetted for "thinning" & inevitable removal of multiple canopy layers & structural diversity?

Mesic mixed conifer habitats are primarily cool Douglas-fir, grand fir sites and larch sites. The desired condition is a multi-layered old forest with a diversity of structural elements. Conservation focal species and habitat conditions include: Vaux's swift for large snags; Townsend's warbler for overstory canopy closure, varied thrush for structural diversity and multiple layers; MacGillivray's warbler for a dense shrub layer in forest openings or understory; and olive-sided flycatcher for edges and openings created by fire.

There are about 1,300 acres of mesic mixed conifer habitat with multiple layers and large trees in the project planning area. Dense shrub layers occur in patches but are uncommon. Edges and openings created by fire are lacking. (*) We are concerned that planned logging & fuel reduction in moister mixed conifer forest will hurt: Vaux's swift, Townsend's warbler, Varied Thrush, & MacGillivray's Warbler.

Riparian Woodland and Shrub Habitat

* Planned prevention of wildfire would hurt Olive-sided Flycatchers.

Riparian vegetation is particularly important to Neotropical migratory songbirds (Sallabanks et al. 2001:217). This habitat type includes riparian communities dominated by shrubs (willow, alder, etc.) that occur along bodies of water or in association with wet meadows and wetlands (Altman 2000). The desired condition is a structurally diverse vegetative community of native species that occur in natural patterns relative to hydrological influences. Focal species and habitat conditions include: Lewis' woodpecker for large snags; red-eyed vireo for canopy foliage and structure; veery for understory foliage and structure; and willow flycatcher for willow/alder shrub patches.

Wet meadow and wetlands are not a component of South George project planning area. Willow, alder, mountain maple, and hawthorn are found sporadically along the streams in the project planning area. The main streams are George Creek, Redhill Gulch, and Asotin Creek. Wet areas such as seeps, bogs, and springs provide small patches of riparian habitat.

(*) We are concerned that logging & fuel reduction in subalpine fir/spruce/lodgepole forest & also in mesic mixed conifer will hurt Hermit thrush.

Subalpine Forest

This habitat type is the coolest and wettest forest zone, dominated by subalpine fir, Engelmann spruce, lodgepole pine, and huckleberry. Important features of the subalpine forest are a multi-layered structure and dense understory of shrubs (Altman 2000), and the focal species is the hermit thrush.

There are about 1,900 acres dominated by subalpine fir, Engelmann spruce, lodgepole pine in a multi-layered condition, however a dense shrub understory is uncommon in the project planning area.

Montane Meadow

This habitat type includes wet and dry meadows dominated by herbaceous vegetation and grass at moderate and high elevations. These meadows are generally associated with streams and springs. The upland sandpiper is the focal species, but is not known to occur in the planning area. Other species that benefit from conservation of this habitat are sandhill crane, long-billed curlew, Wilson's phalarope, common snipe, and savanna sparrow. This type of habitat is not found within the project planning area.

Ex = Reasons for our concerns re: impacts to birds of conservation concern & to Neotropical Migratory Songbirds

Steppe-Shrubland

Steppe-shrublands occur in a wide range of habitat types, including grassland, sagebrush, montane meadows, fallow fields, juniper-steppe, and dry open woodlands and openings in forested habitats (Altman 2000). Habitat criteria (objectives) for the steppe-shrubland habitat type include maintaining a mosaic of steppe and shrubland habitats with < 10 percent tree cover. Associated bird species include vesper sparrow, lark sparrow, Brewer's sparrow, and long-billed curlew.

A large amount of grassland habitat is found on the high plateaus and steep hillsides, especially on Smoothing Iron, Cook, Park, Hogback, Smiley, Cabin, and Little Butte Ridges. Smaller openings are found throughout the forested areas. All total just over 5,000 acres in the project planning area.

Aspen

Bird species associated with aspen include the red-naped sapsucker, Williamson sapsucker, tree swallow, northern pygmy owl, western screech owl, and others. Aspen stands have declined throughout the Blue Mountains, due to a combination of factors including fire suppression, competition with invading shade-tolerant species, overgrazing (livestock and wild ungulates), and drought have contributed to their decline.

Several aspen stands are present, but are small in size (less than 1 acre), spatially discontinuous, and have a deteriorating overstory.

ENVIRONMENTAL CONSEQUENCES

Alternative A - No Action

Direct/Indirect Effects – Alternative A

Under NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alterntative. The current condition of habitats for birds in the planning area would not change in the short term. Snags would likely increase in number, benefiting many snag associated species.

Cumulative Effects – Alternative A

For the No Action alternative, South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present, and reasonably foreseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative. ⊛ See science re: wildfire burned areas – esp. stand replacement fire burns are actually at a deficit compared to historic conditions and are not increasing in recent years.

Inaccurate science:

Effects Common to All Action Alternatives

Direct/Indirect Effects - Alternatives B, C and D

The reduction of crown and ladder fuels would reduce habitat for some birds, but it would also reduce the chances that a large scale uncharacteristic wildfire would eliminate large areas of forest habitat. Timber harvest in the area is expected to improve stand health and resiliency by reducing overstocking, disease, and fuels, and subsequently restore a diversity of tree species. There's already a diversity of tree species in the project area, yet there's plans to eliminate GF+ES.

This is a standard Forest Service P.R. mantra w/no reference to the type of habitat or PAG in question.

Some existing snag habitat would decrease within harvest and fuels reduction units, and removal of danger trees also along haul routes. Snags would be left in units at levels identified in the design features and management requirements outlined in Chapter 2, Table 2-5. The retention of trees ≥ 21 inches DBH in moist forest would reduce the extent of effects to some birds of concern. Additional trees would likely die as a result of broadcast burning in some areas after harvest and thus bolster the number of snags.

⊛ = Reasons for our concerns re: impacts to Birds of Conservation Concern & Neotropical Migratory Songbirds

⊛ Landscape burning and post-harvest fuels treatments (mastication, underburning, etc) would remove some shrubs, grasses, and seedlings from the understory, temporarily reducing cover and decreasing foraging habitat for some birds. If activities occur during springtime, ground nesting birds could be temporarily disrupted but if so, they generally are able to nest again. – What's the evidence of that?!

⊛ This does not count as "creating" + more LOS. Is this even true? →

Dry Forest Habitat ⊛ Failure to disclose & analyze significant impacts!

Thinning in dry forest is expected to immediately "create" single story, old forest ponderosa pine on about 240 acres. Another approximately 275 acres of thinning should provide large old trees in the mid to long-term. Landscape burning and non-commerical tree thinning would open up about 50 acres of ponderosa pine. ⊛ Actually the Forest Service plans to log dry forest LOS & dry forest trees ≥21" dbh, directly harming associated bird species

Mesic Mixed Conifer Habitat

Since no treatments are proposed in moist old forest multi strata (OFMS), there would be very little effect to focal bird species that use multi-layer forest. Habitat would decrease for species that prefer a closed canopy (about 580 acres in Alternatives B and C, none in Alternative D). These include Townsend's Warbler & Varied Thrush.

About 400 acres dominated by subalpine fir, Engelmann spruce, lodgepole pine in a multi-layered condition would be thinned. This may allow a denser shrub understory to develop and become better suited for hermit thrush.

⊛ Inadequate analysis

Riparian

Riparian shrub habitat would not be affected by most activities. Prescribed fire may creep into riparian areas and stimulate shrub growth.

Other Unique Habitats

Aspen, and montane meadow habitat would not be affected. Steppe shrubland would be improved through prescribed burning.

⊛ So what are the direct & indirect effects to these bird species? What are their populations & viability thresholds in the project area?

Cumulative Effects – Alternatives B, C, and D

⊛ Why not? This is illegal skirting of analysis.

The scale of analysis for cumulative effects to birds is South George project planning area. Past, present, and reasonably foreseeable activities in the area in combination with proposed projects would not cause cumulative effects to bird species. Past activities such as timber harvest is reflected in the existing condition. Additional prescribed burning, livestock grazing, non-commercial thinning, recreational uses, and protection of springs would not have a cumulative effect on birds of concern due to the limited duration, amount, intensity and location of these and proposed activities.

How will planned logging & fuel reduction & burning affect their viability?

⊛ Inadequate Cumulative Effects analysis – limited duration, amount, intensity + location is still cumulative effects

THREATENED, ENDANGERED, AND SENSITIVE WILDLIFE SPECIES

Definitions are as follows:

- An endangered species is an animal or plant species listed under the Endangered Species Act that is in danger of extinction throughout all, or a significant portion, of its range.
- A threatened species is an animal or plant species listed under the Endangered Species Act that is likely to become endangered within the foreseeable future throughout all or a significant portion of, its range.
- A sensitive species is an animal or plant species identified by the Forest Service Regional Forester for which species viability is a concern either a) because of significant current or predicted downward trend in population numbers or density, or b) because of significant current or predicted downward trends in habitat capability that would reduce a species existing distribution.

(*) In the absence of population surveys for lynx, it can't be known that there are no resident populations of lynx. We have had positive sightings of lynx in both the Ochoco Nat'l Forest and in Wheeler Co. - arguably less likely habitat than the So. George area?

The Forest Service Region 6 Sensitive Animal List (USFS 2008) and the Federal endangered species list were reviewed for species that may be present. Based on District records, surveys, and monitoring, as well as published literature about distribution and habitat utilization, species that might occur in or near the planning area include:

- Canada lynx,
- Gray wolf,
- California wolverine,
- Townsend's big-eared bat,
- Preble's shrew,
- Northern bald eagle,
- Peregrine falcon,
- Great gray owl,
- White-headed woodpecker, and
- Mountain quail.

(*) Of these species, we are most concerned by potential impacts from proposed action alternatives to: Canada lynx, Gray wolf, California wolverine, Great Gray owl, and White headed woodpecker from forest fragmentation, increased human disturbance, prey loss through lost elk habitat for Gray wolf, & loss of large trees re: lynx + wolverine re: Great Gray owl & White-headed woodpecker.

There is no habitat for the gray flycatcher, green-tailed towhee, upland sandpiper, northern leopard frog, and striped whipsnake, and they are not expected to occur in the project planning area. These species and their habitat would not be affected by the proposed activities; therefore, no further discussion is necessary.

AFFECTED ENVIRONMENT - Canada lynx (Threatened)

Umatilla National Forest is currently considered unoccupied by Canada lynx (USFS 2006). Based on the lack of reproduction records, limited verified records of lynx, low frequency of occurrences, and correlations with cyclic highs with populations in Canada, the U.S. Fish and Wildlife Service concluded that lynx may occur on the forest as dispersers that have never maintained resident populations (USFWS 2003). As a Threatened species, effects to lynx as potential transients and effects to lynx habitat are disclosed here, even though there is not a resident population.

$$\begin{array}{r} 1950 \\ 2\overline{)3900} \\ \underline{19} \\ 100 \end{array}$$

suitable habitat / total habitat

Canada lynx habitat is found in the southwest corner of South George project planning area, at elevations between 4,500 and 5,800 feet. Based on potential vegetation data, the project planning area could provide about 3,900 acres of lynx habitat in subalpine fir and adjacent moist grand fir stand types. About half of these acres are currently unsuitable for lynx. South George project planning area is a fringe habitat for lynx, with moist stands intermixed with dry forest, and reduced continuity due to past harvest activities.

(*) The action alts propose elimination of subalpine fir/ES & moist GF - i.e. potential lynx habitat

ENVIRONMENTAL CONSEQUENCES – Canada Lynx (Threatened)

The action alts also planned further fragmentation of forest habitat - a known impact for lynx.

Alternative A - No Action

Direct/Indirect Effects - Alternative A

Under NEPA, an effect is the result of taking an action. The No Action alternative in this analysis is defined as not taking any of the proposed actions. Therefore, under NEPA, there are no direct or indirect effects of the No Action Alterntative. This does not mean conditions on the ground will remain static, they will in fact, continue to change as disclosed below.

There would be no direct effect to individuals if proposed actions were not implemented. The condition of habitat would not change in the short term. Natural processes over the long term would typically mean continued growth in vegetation, with large trees becoming decadent and eventually providing more lynx

(*) There's no alt other than No Action that avoids impacts to lynx + most other TES + MIS species.

denning habitat. The potential for fires may increase, but generally fire creates better habitat for snowshoe hare, the primary prey of Canada lynx.

Cumulative Effects – Alternative A

For the No Action alternative, South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present and reasonably forseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

Effects Common to All Action Alternatives

Direct/Indirect Effects - Alternatives B, C and D

No direct effects to Canada lynx are expected to occur because the project does not propose any activities identified as mortality risk factors and lynx are not present. The FS does not really know that lynx are not present or that fragmentation & elimination of suitable habitat would not result in mortality!

None of the temporary roads would affect lynx habitat. Fuels reduction proposed in Riparian Habitat Conservation Areas are not within potential lynx habitat. Road maintenance, road and trail decommissioning, and removal of danger trees would have little to no effect to lynx or lynx habitat.

Landscape burning could creep into potential lynx habitat and affect about 175 acres in all action alternatives.

Overall proposed activities would not modify habitats to the point that South George project planning area would no longer provide foraging and denning habitat. This is a conclusory statement that is not justified with analysis in the DEIS.

Effects That Differ by Action Alternative

(*) Given that there are only about 1,950 acres considered suitable lynx habitat (see DEIS p. 3-135), this is a huge impact to potential lynx - removal of more than half its habitat!

Direct/Indirect Effects - Alternatives B and C

Suitable lynx habitat would be reduced by about 1,000 acres. Mechanical harvest, low intensity burning, and mastication of slash would remove vegetation and change stand structure in 7 harvest units, rendering them unsuitable for lynx and their prey in the short term. Regeneration type harvest (seed tree or clear cut with reserves) would reduce lynx habitat by about 100 acres. Commercial thinning would cause approximately 900 acres to become unsuitable for lynx and their primary prey species in the short-term.

The proposed project activities would reduce suitable lynx habitat by 50 percent in the planning area, but about 1,200 acres would *remain suitable* for lynx and their primary prey species.

Direct/Indirect Effects - Alternative D

About 675 acres of potential lynx foraging and denning habitat would be affected by timber removal. There would be no regeneration type harvest in lynx habitat. Commercial thinning, low intensity burning, and mastication of slash would remove vegetation and change stand structure, resulting in conditions less suitable for lynx. About 1,500 acres would remain suitable for lynx in the planning area.

(*) The fact there was established a lynx analysis unit indicates suitable habitat for lynx + potential presence.

Cumulative Effects – Alternativs B, C, and D

The scale of analysis for cumulative effects is the Asotin Lynx Analysis Unit. Ongoing non-commercial thinnning in the project area would affect an additional 50 acres of potential lynx foraging habitat. Cumulatively, about 1,200 acres of lynx habitat within the project planning area would be altered over the next 10 years. Both the School and Columbia Complex Fires temporarily reduced lynx habitat to the west of the project planning area, but nearly 30,000 acres of suitable habitat are still available. No other past, ongoing, or future foreseeable projects would cause cumulative effects to lynx.

(*) = Reasons for our concern re: impacts to Gray wolves, Wolverines, etc.

Overall, there would be no effect to Canada lynx, because lynx are not known to use the area. The Blue Mountains are considered 'unoccupied' by resident lynx (USFS 2006), and a reduction of suitable habitat on the fringe of lynx range is not expected to have any impact on the lynx population. Since lynx are sighted further South, So. George may not be the absolute fringe of lynx range.

AFFECTED ENVIRONMENT - Sensitive Wildlife Species

Gray wolf (Sensitive)

The gray wolf is a habitat generalist inhabiting a variety of plant communities typically containing a mix of forested and open areas with a variety of topographic features. South George project planning area provides abundant deer and elk, as well as other prey species for wolves year-round. No wolf denning or rendezvous sites are known within the project planning area. Wolves dispersing from the Idaho population would likely continue to find their way into the Blue Mountains.

The project planning area is within the Northern Rocky Mountain Distinct Population Segment (DPS) of the gray wolf, which was recently removed from the Endangered Species List (USFWS 2011, USFWS 2009). However, the state of Washington will continue to manage gray wolf as a state endangered species until more packs are established (WDFW 2008).

California wolverine (Sensitive)

Wolverines typically inhabit high elevation conifer forest where sufficient food is available and human activity is low. Denning habitat is usually open rocky talus slopes where snow depths remain over 3 feet into spring. They tend to forage over large areas and travel long distances. The majority of the project planning area is suitable for wolverine foraging, but no potential denning areas are known. There are no indications that wolverine do more than pass through on a rare occasion.

Without population surveys, Wolverine status & viability thresholds in the project area can't be known.

Townsend's big-eared bat (Sensitive)

Big-eared bats have been documented near the town of Asotin, but are not expected to occur within the project planning area. The big-eared bat occurs in a wide variety of habitats including coniferous forests but is strongly associated with spacious cavern-like structures for roosting during all stages of its life cycle (Gruver and Keinath 2006). Typically, they use caves and mines, but have been noted roosting in attics and abandoned buildings, large hollows of redwood trees, in lava tubes and under bridges (Gruver and Keinath 2006). These sites are highly sensitive to disturbance and human interference. Individuals or small groups (3-5 individuals) of bats may day roost in hollow and creviced trees and snags near water for a limited time, but tend to stay within a few miles of colonial roosts (Perkins and Schommer 1992).

Preble's shrew (Sensitive)

Preble's shrews are an uncommonly noted species that has been primarily reported in high desert riparian areas. According to Armstrong (1957), nine specimens of Preble's shrew were captured in pit traps on Pomeroy Ranger District between 5,000 and 6,000 feet in elevation. These are the only records of Preble's shrew in the state of Washington. The sites were described in very general terms as lodgepole pine with small poles, and fir forest, and named several springs (Armstrong 1957). Based on other records throughout their range, it is likely that these captures were in riparian areas within forest openings. Several areas within the project planning area could be considered Preble's shrew habitat, including riparian areas within sagebrush grassland, montane meadows, and springs.

Bald eagle (Sensitive)

In eastern Washington, nesting bald eagles are uncommon, but in winter the reservoirs and major tributaries of the Columbia River provide a food source of carrion, fish, and wintering waterfowl. Bald eagles may occasionally travel through the project planning area, but no roost or nest sites are known.

For the No Action alternative, South George project would not be authorizing any actions; therefore it would not be adding anything to the effects of past, present, and reasonably forseeable future actions. Based on the definition provided in the CEQ regulations, there would be no cumulative effects of the No Action Alternative.

Effects Common to All Action Alternatives

(*) loss of satisfactory cover + increased road disturbance could change elk prey availability & increase human disturbance for Gray wolves.

Direct/Indirect Effects - Alternatives B, C, and D

Proposed activities would not disturb key wolf areas such as den sites, would not change prey availability, and would not increase public access in the area. Wolves are not known to be using the area currently therefore; there would be no impact to gray wolf. Wolf use of NE OR is increasing - without population surveys it's impossible to know they are not in the area.

Wolverines have not been documented in this area, but may pass through undetected and/or stay for short periods. Proposed activities could have short-term effects, but the risk of disturbance to wolverines is considered very low. None of the treatment areas are near wolverine denning habitat. Activities proposed will not alter prey availability or use of the area by wolverine; therefore, this project will not cause a trend toward federal listing and there will be no impact to wolverine. (*) Loss of cover for elk decreases prey and more roads increase human disturbance - impacts to Wolverines.

Proposed activities would not affect caves, buildings, or mine adits that attract big-eared bats. Since there are no historical or recent records of this species in the project planning area, and no nearby roosting sites known, there would be no impact to big-eared bat.

Preble's shrews are not known to occur in the project planning area. The vast majority of riparian areas would be protected from timber harvest, and no pole size lodgepole pine stands are affected. Therefore, there would be no impact to Preble's shrew.

Use of the area by bald eagle is incidental. If this species were in the area during project activities, increased human presence and noise could cause it to move elsewhere. Smoke from prescribed fires may discourage use of the area, but this is limited in duration. Since it is unlikely they would be present during project activities, there would be no impact to bald eagle.

Use of the area by peregrine falcon is incidental. If this species were in the area during project activities, increased human presence and noise could cause it to move elsewhere. Smoke from prescribed fires may discourage use of the area, but this would be limited to a few days. Falcons are highly mobile and there is sufficient habitat for foraging within and outside of the planning area. Since it is unlikely that individuals would be present during activities, there would be no impact to peregrine falcon.

(*) South George project planning area contains many forested areas adjacent to open grassland and old clearcuts. Tree and snag removal in these areas could reduce the suitability of habitat for great gray owls. Therefore, proposed activities may impact great gray owl, but are not expected to cause a loss of population viability or result in a trend toward federal listing.

No timber harvest would occur in existing white-headed woodpecker habitat, but thinning would create about 240 acres of old forest single story ponderosa pine. Landscape burning and non-commercial tree thinning would affect about 50 acres of large ponderosa pine stands. Since existing habitat would not decrease, and no nesting is currently known, the proposed projects may impact white-headed woodpecker, but are not expected to cause a loss of population viability or result in a trend toward federal listing.