

## Details

Reviewer	Comments
Forsman	<p>Page 5-5. I think the term “regeneration harvest” is just a way of not saying what you really mean and is confusing to many people. What you mean is “clear-cutting”, and I suggest you should use that term. Our political and management language is full of this kind of stuff, and I think it is an intentional way of putting a spin on what really happens. An analogy in my field of wildlife management is when someone says that they “sacrificed” an animal for scientific study. What they really mean is that they killed it so they could stuff it and put it in a museum.</p> <p>Page 5-7. The text says that a definition of old-growth is on page 4-24. My page 4-24 does not include a definition of old-growth.</p> <p>Page 5-10. You mention species that have “ large home ranges and minimum dispersal capabilities”. This seems odd to me, since species with large home ranges (spotted owls, grizzly bears, mountain lions, wolves, etc.) generally have high dispersal capabilities. It is species that have small home ranges (e.g., tree voles) that tend to have low dispersal capabilities.</p>
Gresswell	<p style="text-align: center;"><b>Literature Cited</b></p> <p>Baker, W. L. 1989. Effect of spatial heterogeneity on fire-interval distributions. <i>Canadian Journal of Forest Research</i> 19:700-706.</p> <p>Baker, W. L. 1994. Restoration of landscape structure altered by fire suppression. <i>Conservation Biology</i> 8:763-769.</p> <p>Barrett, T.M. 2001. Models of vegetation change for landscape planning: a comparison of FETM, LANDSUM, SIMPPLLE, and VDDT. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, General Technical Report RMRS-GTR-76-WWW.</p> <p>Beschta, R. L., J. J. Rhodes, J. B. Kauffman, R. E. Gresswell, G. W. Minshall, C. A. Frissell, D. A. Perry, R Hauer, and J. R. Karr. In press. Postfire Management on Forested Public Lands of the Western USA <i>Conservation Biology</i> X: XXX-XXX.</p> <p>Gresswell, R. E. 1999. Fire and aquatic ecosystems in forested biomes of North America. <i>Transaction of the American Fisheries Society</i> 128:193-221.</p> <p>Kurz, W.A., S. J. Beukema, W. Klenner, J. A. Greenough, D. C. E. Robinson, A.D. Sharpe and T.M. Webb. 2000. TELSA: the Tool for Exploratory Landscape Scenario Analyses. <i>Computers and Electronics in Agriculture</i> 27: 227-242.</p>

	<p>May, C. L. and R. E. Gresswell. 2003a. Processes and rates of sediment and wood accumulation in headwater streams of the central Oregon Coast Range. <i>Earth Surface Processes and Landforms</i> 28: 409-424.</p> <p>May, C. L. and R. E. Gresswell. 2003b. Large wood recruitment and redistribution in headwater streams in the southern Oregon coast range, U.S.A <i>Canadian Journal of Forest Research</i> 33: 1352-1362.</p> <p>McCarter, J. B. 2001. Landscape Management System (LMS): Background, methods, and computer tools for integrating forest inventory, GIS, growth and yield, visualization and analysis tools for sustaining multiple forest objectives. Doctoral dissertation. College of Forest Resources, University of Washington, Seattle.</p> <p>Reeves, G. H., L. E. Benda, K. M. Burnett, P. A. Bisson, and J. R. Sedell. 1995. A disturbance-based ecosystem approach to maintaining and restoring freshwater habitats of evolutionarily significant units of anadromous salmonids in the Pacific Northwest. <i>American Fisheries Society Symposium</i> 17:334-349.</p> <p>Spies, T. A.; Cline, S. P. 1988. Coarse woody debris in forests and plantations of coastal Oregon. Pages 5-14 <i>In</i> Maser, Chris, R. F. Tarrant, J. M. Trappe, and J. F. Franklin, editors. <i>From the forest to the sea: a story of fallen trees</i>. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station and U.S. Department of the Interior, Bureau of Land Management Gen. Tech. Rep. PNW-GTR-229. Portland, OR: 5-24</p> <p>Wofford, J. E. B. 2004. Factors influencing within-watershed genetic variation of coastal cutthroat trout in Camp Creek, Oregon. Masters Thesis. Oregon State University, Corvallis.</p> <p>Wright Jr., H. E. 1974. Landscape development, forest fires, and wilderness management. <i>Science</i> 186:487-495.</p>
Oliver	<p style="text-align: center;"><b>Places to be More Explicit</b></p> <p>There are several places where I suggest you be more explicit in this plan:</p> <p>Pg. 5-2: Para 5 implies the forest management plan sets the harvest level, while para 6 implies it is set through the implementation plan. This whole area of being explicit about the harvest level is confusing in this plan—and needs more work. A lot of mistakes have been made by setting a “top-down” number; on the other hand, there needs to be coordination among the districts. This plan does not tell how this will be done. For example:</p> <p>Pg. 4-5: You are correct that it is not necessary to treat all resources equally...(but you need to be cognizant of the tradeoffs in treatment of</p>

resources based on actions)

Pg. 4-24: You need to be a little more explicit about telling us minimum amounts of each you expect across a landscape. (I agree that anything too exact would be a guarantee of failure.) If for no other reasons, this will allow you to do CQI.

Pg. 4-25: 1<sup>st</sup> para. This sounds suspiciously like you're going to clearcut a watershed, and then move to the next. (If so, why not say so?)

Pg. 4-25: Is the implementation plan another document? How do implementers decide what species to include in the implementation plan?

Pg. 4-26: First set of bullet points, 3<sup>rd</sup> bullet. Here, these should be targeted and identified for the fine filter management.

Pg. 4-50: Nice words, but what does “watershed health” mean? Talk about “relevant, understandable, and logical information...” But, since this is a plan, what specifically is this information?

Pg. 5-9: Interface between this plan and the “District implementation planning process” is critical. Do the districts understand well enough what to do?

Pg. 5-13: Suggest you add numerical standards—or targets. (I suggest 50% of stands contain these, 50% don't; however, I suspect others would want higher percentage not containing them.)

Pg. 5-15: Good map. (Need more of them.)

Pg. 5-16: Last bullet on page. Leave more in some units, fewer in others.

Pg. 5-21: Strategy 5c appears very labor-intensive. Are you committing yourself to doing this on all stands?

Pg. 5-21: The first paragraph is very good & appropriate.

Pg. 5-23 & 24: A very important component will be how these individual actions are undertaken—and how they are coordinated. There will need to be a lot of give and take between the district implementations and the ESF as a whole. I would suggest giving more information in here on the condition of each district—such as, maps, amounts of old growth, riparian zones, age class distributions, etc. Then, discuss with each district what the context of that district's management is—so that district will understand whether their role is to provide 11% harvest per decade or 4%.

<b>A FEW GRAMMATICAL SUGGESTIONS</b>	
	<p>Pg. 4-10: para. 5, third line—awkward grammar.</p> <p>Pg. 4-15: 4<sup>th</sup> line down: “due to” is a colloquial term. Here and elsewhere, replace it with “because of” or “caused by.”</p> <p>Pg. 4-16 to 4-17. Actually, this paragraph is confusing. (Committee built?)</p> <p>Pg. 4-17: 2<sup>nd</sup> paragraph. Need to define “decadence.”</p> <p>Pg. 4-14: 2<sup>nd</sup> paragraph: next to last line. Used “structure” to define “structure. “</p> <p>Pg. 4-37 &amp; 38: This section seems to start of a bit repetitive; however, the last half is very worthwhile.</p> <p>Pg. 4-11: 2<sup>nd</sup> para, next to last line: Not influence by human activities. Perhaps reword this; I know what you’re trying to say; however, people have influenced the American forests for the past 10K years...</p>
Ohmann	<p>Additional comments on the FMP:</p> <p>Chapter 2:</p> <ul style="list-style-type: none"> <li>• This chapter lacks a description of the ecology and variation in vegetation (plant communities) present on the ESF. This is important background information for understanding the concepts and strategies in later chapters.</li> <li>• p. 2-5, ‘Consideration of Alternative Strategies’ – This section was very helpful context.</li> <li>• p. 2-13 – It needs to be better emphasized that this section (‘Biodiversity and Disturbance History’) deals with <i>natural</i> disturbance regimes. It would be helpful to see, somewhere in 8 this chapter, a discussion of human disturbances and how they (natural and human) interact in shaping the current landscape. I.e., natural disturbances have largely been supplanted by fire suppression and timber harvest and management, yet it is important to understand natural disturbance regimes as a reference for management. Discuss how managed and ‘natural’ stands differ.</li> <li>• p. 2-22+ – Habitat capability models developed by CLAMS for some of these species may be of use (contact Tom Spies).</li> <li>• p. 2-52 – The caption and/or the figure itself are incorrect (‘Northwest Oregon’).</li> <li>• p. 2-55 – How does this land management classification relate to others used in the FMP?</li> <li>• p. 2-71 – The first paragraph seems out of place here.</li> <li>• p. 2-74 – Under these definitions, stands that are predominantly hardwood will be classified as conifer stands. Although I’m not sure how this definition affects management decisions, I recommend recognizing a</li> </ul>

mixed conifer-hardwood type that is 30-70% conifer. These stands are very different ecologically from pure conifer stands.

- p. 2-75 – It would be interesting to see how these age classes relate to the structural stages presented in later chapters.

#### Chapter 3:

- p. 3-6 – I'm pleased to see that the FMP will consider the regional context.
- p. 3-7 – I'm also pleased to see the prominence of monitoring and adaptive management in the FMP.
- p. 3-11, par. 1 under 'Management Perspective' – Good to see this acknowledgment of the plan to adjust management activities as natural disturbances occur. But I don't recall seeing much follow-through on this in later chapters? What will you do in the case of a large catastrophic wildfire?

#### Chapter 4:

- General comment: Ecosystem management typically encompasses social, economic, and ecological considerations, so I found the structuring of the concepts in this chapter somewhat awkward. Perhaps reword the second concept to be more in parallel with the first, e.g. 'Sustainable Ecological Function.'
- p. 4-5 – After reading through the FMP, I was left somewhat confused on what is meant to be conveyed by 'integrated resource management.' My sense is that the primary concept here is integration. Yet the two key concepts listed on this page address spatial scale and aquatic systems. It seems like the key to successful integration will be in how conflicts between inherently incompatible objectives will be balanced and resolved. If so, your philosophy and approach to this should be described here.
- p. 4-13 – Another good citation here is Lindenmayer and Franklin (2002).
- p. 4-13 – Providing a diversity of structures is also consistent with the concept of 'risk spreading.' (Unfortunately, I don't have a good citation for this.)
- p. 4-14 – Similar to my comment on Chapter 3, it needs to be clarified that this section deals with stand development under natural disturbance regimes. It would be helpful to see a parallel discussion of stand development in managed forests, and how managed and natural forests differ in structure and composition. Also, this section should more explicitly discuss the relationship between disturbance and landscape pattern. As currently written, information on landscape and stand scales are mixed together.
- p. 4-15 – This entire section is very general and would be more useful if it were made more specific to the ESF. For example, how do disturbance *regimes* (e.g., fire intensity and return interval) vary across the ESF? See Impara's dissertation for information on the Coast Range. How do stand development processes vary among the major forest types found on

	<p>the ESF?</p> <ul style="list-style-type: none"> <li>• p. 4-16 – Where do hardwoods fit in this stand development scenario? This is a key ecological component of both upland and aquatic forests on the ESF.</li> <li>• p. 4-17, 2<sup>nd</sup> par. under ‘Understory Reinitiation.’ – We do not see this low point in large dead wood in the current Coast Range landscape, due to influences of fire suppression, logging, and strong legacy effects from previous forests (Ohmann et al., in review; Ohmann and Waddell 2002). Again, this is a place where it would be helpful to describe the current forest landscape in addition to the textbook description of stand development.</li> <li>• p. 4-18 – The three stand structures in the 2<sup>nd</sup> par. on this page, which supposedly are used in the FMP, get lost among all the other pages of descriptions of stand structures. Please explain the rationale for dividing understory reinitiation between two of the stand structures. Why isn’t old growth considered part of the complex structure?</li> <li>• p. 4-19-21 – Aha, now I see managed forest conditions described for the first time, in these boxes. What stand ages are associated with these stand structures on the ESF?</li> <li>• p. 4-22 – An alternative way to define old growth is the old-growth habitat index (OGHI) recently developed by Spies and Pabst (contact Tom Spies).</li> <li>• p. 4-22, last par. – There are more recent CLAMS citations available (e.g., Spies et al. (2002).</li> <li>• p. 4-22 – CLAMS also recognizes a mixed conifer-hardwood class that is 30-70% hardwood.</li> <li>• p. 4-24 – I agree that it is both scientifically defensible and realistic from a practical perspective to use ranges of values rather than specific values.</li> <li>• p. 4-25 – The coarse filter / fine-filter concept was introduced by The Nature Conservancy.</li> <li>• p. 4-15 – Will different forest types (species compositions) be included in your coarse filter analyses? If not, they should be.</li> <li>• p. 4-16 – Although there is no single landscape size, you should define the sizes you will be considering (e.g., I assume you won’t be managing beetle-scale landscapes).</li> <li>• p. 4-16 – Hardwoods should be listed as one of the key within-stand elements.</li> <li>• p. 4-28 – This is a fairly lengthy review of landscape pattern, yet it isn’t clear how the concepts will be applied to the ESF. A good citation for the Coast Range is McGarigal and McComb (1995).</li> <li>• p. 4-32 – A good general cite for this section is Rose et al. (2001).</li> <li>• p. 4-33 – Either expand and rename the ‘understory vegetation’ section to include hardwoods, or add a hardwood section. (The information on bigleaf maple doesn’t fit in this section.)</li> <li>• p. 4-34, par. 2 – The notion of the ‘balance of nature’ is no longer in</li> </ul>
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	<p>fashion – I would avoid using this language (‘out of balance’).</p> <ul style="list-style-type: none"> <li>• p. 4-35 – I think the magnitude of the problem of exotic pests and other species warrants greater coverage in the FMP.</li> <li>• p. 4-36 – It’s not clear why aquatic systems are singled out in this section on integrated resource management, which encompasses a long list of resources and values. Is it just because they didn’t logically fit anywhere else? Integrating upland (stands and patches) and aquatic (linear networks) considerations is an ongoing challenge!</li> <li>• p. 4-38 – To my view, the key concept in the integration section is in par. 1: ‘...Where overlaps occur... ...the resource requiring the highest level of protection will determine the management approach...’ Where the rubber hits the road, in implementing the FMP, will be in the resolution of conflicts among competing values or resources. These few sentences appear to present the approach for dealing with this, but they are buried and lost. Also, the meaning of ‘highest’ in this context is ambiguous.</li> <li>• p. 4-41 – The list of key terms is extremely helpful. They should be added to other sections where they’re lacking.</li> </ul> <p>Chapter 5:</p> <ul style="list-style-type: none"> <li>• See several comments on this chapter under questions 2, 3, and 4 above.</li> <li>• p. 5-14 – By removing legacy live and dead trees, salvaging will do quite the opposite of placing ‘...reserve areas on a pathway toward complex habitat.’ There may be other valid justifications for salvaging, but this isn’t one of them.</li> <li>• p. 5-52 – Consider adding a strategy aimed at distributing reserves and stand structures among different forest plant communities (defined by species composition).</li> <li>• p. 5-56 – Retention of larger dead wood is important to soil as well as wildlife (covered in earlier sections), and should be mentioned here.</li> <li>• p. 5-58-59 – Interestingly, clearcuts are consistently referred to as ‘regeneration harvests’ everywhere else in the FMP except here.</li> <li>• p. 5-58 – Does a designation of ‘complex stand’ effectively amount to applying a longer rotation age? I think it would be helpful to see the stand structures related to stand ages and rotation ages, at least approximately, here and in other sections.</li> </ul>
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