

## Appendix B Dry Burton Thin EA - Response to Comments

### 1. SJB\_Mitigation Measures

The EA lists several mitigation measures, also referred to as project design criteria. While some mitigation measures include efficacy ratings, not all measures do. The Ninth Circuit has often remarked that when utilizing mitigation measures to reach findings of no significant impact, the mitigation must be assured to occur and must “completely compensate for any possible adverse environmental impacts.” *Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson*, 685 F.2d 678, 682 (D.C. Cir. 1982). If the effectiveness of such mitigation is not assured, then the Forest Service cannot sign a FONSI and must prepare an EIS. *Foundation for North American Wild Sheep v. U.S. Dep't of Agric.*, 681 F.2d 1172, 1178 (1982). In *Northwest Indian Cemetery Protective Assoc'n. v. Peterson*, the court determined that NEPA requires agencies to “analyze the mitigation measures in detail (and) explain how effective the measures would be . . . A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.” 764 F.2d 581 (9th Cir. 1985).

While Dry Burton has relatively benign environmental consequences, the Forest Service should not forget that it must still demonstrate that the proposed mitigation measures are in fact effective. A short description in an EA or DN/FONSI is usually adequate to establish mitigation measure efficacy.

*Thank you for your comment. Appendix A contains a listing of mitigation measures and project design criteria, including effectiveness determinations for each of the mitigation measures.*

### 2. SJB\_Restoration Projects

The Forest Service has proposed several ancillary restoration projects that are associated with the Dry Burton project. The EA indicates that some of the effects from those projects are analyzed in the Dry Burton EA, but seems to indicate that additional NEPA analysis is required for other associated restoration projects (i.e., items 4 – 9).

Why didn't the USFS assess the environmental consequences in this EA, rather than defer NEPA analysis to some time in the future? It seems that these are worthwhile activities, and actions that would help restore the watershed. Ideally, these projects would be implemented in a timely manner, but deferring NEPA analysis to some time in the future – rather than analyzing them now, and waiting until funding is available later – suggests that these projects may not take place. Therefore, in the future, I urge the Forest Service to consider the effects of such restoration projects contemporaneously with the main project.

**FS Response:** *We appreciate your concern. Some projects were not appropriate for analysis under this EA because they were considered outside the timber sale boundary,*

and therefore not eligible for KV. Other projects were mentioned and in some cases partially analyzed to document intent. The Forest Service cannot promise a time frame for implementation of these projects; however. The Decision Notice will only list those projects that are fully analyzed and would be included in an initial KV Plan for the sale.

### **3. SJB\_Harvest Prescriptions**

I commend the Forest Service on the descriptions of the proposed harvest prescriptions proposed for the Dry Burton project. In addition, the maps showing proposed skid trails and skyline corridors were especially illustrative.

### **4. SJB\_Soils**

In general, this section of the EA was particularly well done. However, I would caution the Forest Service against the use of subsoiling as a mitigation measure for compacted soils. Ripping or subsoiling as a mitigation measure for compaction created by ground-based yarding and road construction is very controversial and complex.

Ripping/subsoiling is designed to break up soil compaction and is most effective in dry soils or sandy non-cohesive soils, because subsoiling effectiveness is determined by soil moisture, soil texture and depth of the operation in the soil.

Ripping is not a soil or restoration mitigation measure. It is however a road decommissioning technique. Subsoiling is a possible soil rehabilitation measure; however, its effectiveness is extremely soil specific. Subsoiling is an agronomic term used for breaking up plow pans generally at depths of 8 to 12 inches. Forestry has started to utilize ripping and subsoiling – originally conceived for agricultural use and never intended as a practice in forested ecosystems – to break up compaction of soils created by excessive use of equipment. This compaction generally extends down well beyond the 12 inch depth and consequently creates the problem of lifting great weights of soil to be fractured. In so doing, if the soil is moist, it generally is compacted from below due to the lifting action. This can increase the degradation of soil rather than start the rehabilitation process. Soils that exhibit plastic characteristics generally are negatively impacted by subsoiling. This, as well as all restoration or rehabilitation measures, need to take soils individually into consideration. This consideration also needs to address the soils current condition as to vegetation present, slopes, aspects, depths, topsoil characteristics etc. Restoration and rehabilitation should take into consideration time frames that are commonly tens to hundreds of years for soil recovery.

In considering the use of subsoiling to mitigate compacted soils, I would urge the Forest Service to consider a report produced by Dr. Richard Hart after monitoring the practice on the Deschutes National Forest, *Assessing the Effects of Sub-Soiling Within the Upper Chewaucan Watershed: A Report to the Forest Service and the Community on the Effectiveness of this Treatment*, 2004. I am happy to provide a copy of this report upon request. Briefly, this report concludes that subsoiling is rarely an effective mitigation measure for compacted soils, and often does more harm than good. While Hart's study

was conducted on the Deschutes, its insight should prove valuable to managers on the Gifford Pinchot.

**FS Response:** *We appreciate your comments and concerns regarding subsoiling. Please forward a copy of the Report you refer to. We agree that subsoiling is not appropriate in all locations, and may in fact cause more harm than good. However, at this point in time we prefer to subsoil or rip along heavily compacted areas, such as temporary roads and landings, and the obliteration of existing spec roads, including some old skid trails. The subsequent treatment is critical to the success of such treatments. In many, if not most cases it is not appropriate to subsoil skid trails. However, old skid trails are still evident within Dry Burton units; some of the old “trails” continue to reroute and channel water along their surfaces. In the context of the Dry Burton Thin, there are two helicopter landings and no temporary roads. This would reduce the amount of area that requires subsoiling.*

I also appreciate the Forest Service’s decision to drop all units with unstable slopes and soils from harvest. As you know, these areas are particularly sensitive to management, and should be protected as Riparian Reserves or dropped from consideration.

## 5. SJB\_Water Quality.

As opposed to the soils section of the EA, however, the water quality/hydrology section was lacking in several ways. First, although the EA discusses the direct, indirect, short term, and long term effects of the action alternatives on water quality, there is no discussion of the cumulative effects of the Dry Burton timber sale on water quality: this section is simply missing from the EA. 40 C.F.R. § 1508.7. Presumably this was an oversight, but it must be corrected before the DN/FONSI is published.

Second, and relatedly, the EA does not analyze the effects of Alternative 4.1 on water quality. Although the action alternatives are discussed, the preferred alternative is not. Obviously, if this is the preferred alternative, it must be analyzed prior to implementation.

Third (and a pattern is starting to develop), there is no discussion of the cumulative effects of the stream restoration and road stabilization projects. The EA stops in mid-sentence in this section of the EA. Assuming no additional NEPA will be conducted for these projects, the Forest Service should analyze the effects of these activities in the Dry Burton EA.

**FS Response:** *The omissions listed above related to water quality are discussed in different sections of the EA; however, we agree the EA does not provide a good summary of cumulative effects that may result from implementation of the alternatives, including the proposed action. See peak flow discussion pages 49-52, disturbance history and future planned harvest activities pages 30-31, cumulative effects analysis for fisheries and references to retention of hydrologic function and form pages 57 and 63.*

*The effects analysis for Alternative 4.1 is identical to that for Alternative 4, with the exception that under Alternative 4.1, the effects related to skid trail, landing and temporary road construction would be eliminated. Water quality effects resulting from implementation of the Dry Burton Thin are expected to be related exclusively to the potential for sediment production, and not related to water temperature (water temperature was not identified as an issue due to the implementation of design criteria specific to riparian reserves). Short-term effects would be related to log haul and fine sediment and dust typically produced along haul routes. Project design criteria including the placement of sediment retention structures and the management of such structures where the haul route crosses streams, the treatment of helicopter landings during and following harvest activities would minimize the contribution of sediment to streams and potential for short-term, long-term and cumulative effects.*

*Road work, including best management practices that improve drainage and treat closed roads would have cumulative effects similar to those described for the treatment of roads, including a beneficial long-term and cumulative effect of improving surface hydrology that has been affected by road construction and poor drainage design.*

*The cumulative effects related to water quality for all action Alternatives 2 through 4 would be limited to potential sediment contributions from the construction and rehabilitation of landings, temporary roads and skid trails. This effect is expected to be short-term in nature – approximately two years following treatment, and is not expected to add to the cumulative effects of past harvest activity within the Smith Creek drainage. The treatment of roads including proposed restoration treatments and those related to the timber sale are expected to reduce the cumulative effects of historical harvest and road building practices within the drainage. In summary, because potential sediment increases are considered short-term in nature, implementation of the action alternatives, and in particular Alternative 4.1 are not expected to contribute to cumulative effects related to water quality and sediment production.*

## **6. SJB\_Northern Spotted Owl and NSO Critical Habitat.**

The Forest Service surmises that the Dry Burton timber sale will increase the size of the residual trees in the treated stands, thus creating mature and old growth habitat faster than would develop naturally. The EA also indicates that the harvest units are dispersal owl habitat that generally lacks the characteristics of nesting, roosting, and foraging (NRF) habitat. The harvest prescriptions will reduce the canopy cover of the harvest units to approximately 60-65%.

I am concerned that the Forest Service is reducing the canopy cover in treated stands to the bare minimum that is still considered to be dispersal habitat for the owl. While dispersal habitat is not the limiting factor for owl survival, continuing to reduce the amount of suitable dispersal habitat in an area that is heavily fragmented could have significant effects on the species. Indeed, the Forest Service has little information regarding spotted owl dispersal success: juvenile mortality is 70%, which indicates that successful dispersal is a problem for the species.

In order to address this issue, I would suggest raising canopy retention to 70% in all units, especially unit 4, which appears to have the “best” dispersal habitat in the Dry Burton planning area. Maintaining the “best, marginal” habitat by retaining adequate canopy cover would help ensure that the two (or three) spotted owl pairs in the planning area will produce young that will successfully disperse.

**FS Response:** *We have reduced the harvested portion of Unit 4 to approximately 11 acres, which removes the north portion of the unit and an older stand that contains the best dispersal habitat. This measure also removes a portion of the unit that contains abundant legacy features. We believe that reducing the size of Unit 4 would have the effect of adding a variable element to the stand, leaving a higher density in the northern piece while retaining 60% canopy in the south half of the unit.*

## **7. SJB\_Snags**

Thank you for retaining legacy features, especially snags. Snags are critically important to a variety of species and natural processes, and most have been removed from the landscape due to historic timber harvest. I appreciate that the agency has attempted to buffer pockets of legacies and individual snags by incorporating these features into the harvest prescriptions – thanks!

## **8. SJB\_Survey and Manage**

The EA indicates that surveys have been conducted for Survey and Manage mollusks and amphibians. However, the EA is not clear regarding whether surveys for Survey and Manage plants have been conducted. As you know, the 2001 Survey and Manage ROD is currently the guiding document regarding Survey and Manage requirements. Although it may be true that there is no suitable habitat in the Dry Burton planning area for these species, the DN/FONSI should clearly state that this is the case, and that surveys were not required.

**FS Response:** *We determined that it was appropriate to conduct surveys for Survey and Manage botanical species in Dry Burton Thin units. Because original surveys conducted last year did not address Survey and Manage botanical species, and we believe that habitat was potential present for some of the species, we surveyed this year. The DN and FONSI address this.*

## **9. RH\_Restoration Projects**

The EA states that restoration projects, such as pre-project treatment of a large meadow knapweed population, stabilization of project area roads, and culvert repairs will require additional funding, additional surveys, new scoping and analysis or all of the above. Given these preconditions, we question whether the restoration projects will occur anytime in the near future. Why weren't the necessary surveys, scoping, and analysis

incorporated into the project EA? What is the probability that these projects will be implemented in the near future?

*FS Response: Please see our response to SJB\_2 above.*

### **10. RH\_Hydrology Effects Analysis**

The Hydrology Effects section is missing an analysis of cumulative effects of the Dry Burton timber sale on water quality. Presumably this was an oversight, but it should be corrected before the DN/FONSI is published.

Moreover, the EA does not analyze the effects of Alternative 4.1 in the Hydrology Effects section. Although the action alternatives are discussed, the preferred alternative is not. This also should be corrected prior to implementation.

Finally, there is no discussion of the cumulative effects of the restoration projects. The EA stops in mid-sentence in this section of the EA (see pg. 62). The Forest Service should analyze the cumulative effects of these activities in the Dry Burton EA.

*FS Response: Please see our response to SJB\_5 above.*

### **11. RH\_Salal**

The EA states on page 34 that unit 5 has a southern exposure that “is covered in salal.” The Task Force is concerned that thinning this section of unit 5 will result in rapid growth of this salal which will then out compete new seedlings. We therefore recommend that this section of the unit either be under-planted with minor tree species or reduced to a very light thin to avoid post-project heavy salal growth.

*FS Response: The observation concerning salal in the EA is related to the potential effect of timber harvest activities on non-timber forest product harvesters, and not the concern that salal would out-compete new seedlings. This was not identified as an issue so it was discussed in the EA. However, we recognize that salal competition may be a concern in some locations. We believe that the harvest prescription retaining 60% of the canopy is conservative enough that the development of understory structure would be limited. The DxD prescription allows for a variable treatment, such that the effect of the DxD approach would result in the harvest of fewer trees where salal is present – because at these locations, the canopy is already relatively open.*

*We do not believe that underplanting would be successful given such a heavy retention of the canopy, except where natural gaps may currently exist.*

### **12. BK – Impacts to Trails**

“.... I am OPPOSED to ANY timber harvesting activity within ¼ mile from ANY trail, be it hiker only or multi-use. (Actually, after my last visit up to Blue Lake, I'd prefer they

allowed 1/2 mile, but that might be asking a bit much, and make it impossible to actually get any bids on sale proposals.)

“To support my argument: drive down and look at what happened to the old " Wright Meadow Trail " ( one ranger district south of you ) on the way up to Craggy Peak. It's been 10 or 12 years since I climbed Craggy Peak, and that section through Wright Meadow was bloody awful, and I'd doubt it looks much better at present.”

*FS Response: We appreciate your concern regarding the trail. We do not believe the commercial thinning treatment of the unit adjacent to the lowest section of the trail in question (No. 123) would result in a condition that is inconsistent with the GP Forest Plan, or that it has to be visually displeasing. We have a prescription that pulls slash 50 feet from the trail, and would not only reduce potential fire hazards, but remove the visual impact of logging slash.*

### **13. BK – Helicopter logging profitability**

While I'm sure whoever's in charge of the sale had good reason to specify "helicopter only", I wonder if that may make it not as profitable for the cutter, thereby making it not worthwhile for them to submit bids. I am NOT opposed to pulling wood out with a cable, provided "best management practices" are followed, and a serious effort is made to minimize damage and erosion.

*FS Response: We share your concern about profitability. We included all units as helicopter units to add to the volume that would be logged via helicopter under Alternative 4. This would presumably make the sale more attractive because of increased volume to be yarded via helicopter. Another important objective is that helicopter logging would reduce or eliminate the need for skid trails, temporary roads, and landings associated with ground-based and skyline harvest – therefore reducing the effects of such activities associated with harvest.*

### **14. BK – Opposed to construction of temporary roads and landings**

I do NOT support the construction of new (even temporary) roads and/or landings. I ENCOURAGE the removal/decommissioning/rehabilitation of any and all dead-end spur roads and/or landings which are used solely for the purpose of timber harvesting and do not lead to a trailhead or other commonly-used recreational site. ( One elk hunter's favorite dead-end spur does not qualify as "commonly-used". )

*FS Response: See comment to number 13 above. Helicopter yarding would eliminate temporary roads, skid roads and reduce the number of landings.*