APPENDIX C

RESPONSE TO COMMENTS

Comment Letter from Conservation Northwest and Gifford Pinchot Task Force:

<table>
<tr><td>Comment Letter, page 2</td><td>In stands 6, 14, 16, and 17 gaps will be included, yet no or minimal additional retention islands (skips) are included. While no-cut riparian reserve buffers do provide skips, they do not necessarily break up large areas of contiguous thinning. Aiming for 10% skips acreage in these stands would achieve the goal of creating more patchy stands. Adding a few gaps or heavy thinning area would offset any volume reduction.</td></tr>
<tr><td></td><td>During unit layout, there was a significant decrease in acres from the proposed unit acres identified in the EA. These reductions were to provide for riparian reserve buffers and sensitive botanical and mollusk sites. In Units 6, 14, and 16 the Riparian Reserves and other buffers serve to break the units up into smaller sections, reducing the size if the areas of contiguous thinning. The Riparian Reserve buffers in Unit 17 are along three sides, and none are in the interior of the unit. The remaining portion to be thinned will not be broken up by skips, but the total size is reduced.

The prescription for these Matrix units is consistent with the Northwest Forest Plan. It is expected that additional skip acreage within these units is not needed to meet the desired future condition.

<table>
<tr><th></th><th>EA Acres</th><th>Layout Acres</th><th>Reduction</th></tr>
<tr><td>Unit 6</td><td>24</td><td>19</td><td>21%</td></tr>
<tr><td>Unit 14</td><td>52</td><td>43</td><td>17%</td></tr>
<tr><td>Unit 16</td><td>49</td><td>39</td><td>20%</td></tr>
<tr><td>Unit 17</td><td>48</td><td>37</td><td>23%</td></tr>
</table>
</td></tr>
<tr><td>Comment Letter, page 2</td><td>In stands 8, 9, 10 leaving an additional 3-4 acres in skips should provide better hiding and thermal cover adjacent to the heavily thinned areas (where forage value will increase) and thus increase overall habitat value. Furthermore, the need for greater Elk forage should be justified in the EA, especially given the large herds in the GP.</td></tr>
<tr><td></td><td>The heavily thinned areas would be adjacent to unthinned areas within and outside of the units, and almost none of the heavily thinned area would be more than 100 yards from hiding cover. According to work by Wisdom et al.[1], there should be no reduction in expected elk use in open forage areas that are within 100 yards of cover. In addition, the heavy thin areas are not open forage, and will provide some cover due to the retained trees, and will not be adjacent to open roads.

In addition, the State of Washington’s Herd Management Plan for the Mount St. Helens elk herd (11/2006) identified a problem due to the creation of LSRs and</td></tr>
</table>

[1] *Wisdom, M.J., L.R. Bright, C.G. Carey, W.W. Hines, R.J. Pederson, D.A. Smithy, J.W. Thomas, and G.W. Witmer. 1986. A model to evaluate elk habitat in western Oregon. Publication No. R6-F&WL-216-1986. USDA Forest Seervice, Pacific Northwest Region, Portland, OR. 36 p.

	overall decline of timber harvest on the Gifford Pinchot National Forest. The reduction in timber harvest will cause a gradual decline in elk carrying capacity. Among the strategies identified in the herd management plan to address this issue are developing silvicultural treatments to improve and increase forage production, and managing suitable matrix lands preferentially for elk.
Comment Letter, pages 2 and 3	**While the proposed prescriptions contain the key elements of variable density thinning, the DxD approach eliminates most, if not all, closely spaced dominant and co-dominant trees. Old growth forests tend to have a clustered, clumped spatial pattern of overstory trees at a fine scale (pg 2). Spacing-based thinning, where growing space for individual trees is maximized, was developed for plantation silviculture. It must be re-examined and modified when the objective is to accelerate the development of the complex structures found in old growth forests (pg 3).**
	The desired future condition for the matrix stands is that the lands are managed for the continued production and utilization of forest resources, principally timber, water, dispersed recreation, and wildlife. Apart from unit 3, which is Late Successional Reserve, the desired future condition for these stands is not to create old growth forests. There are several acres of scattered "skips" within unit 3 that will add this feature to the unit within the coming years.
Comment Letter, page 3	**We fully understand that the GPNF has limited options in terms of implementing thinning prescriptions, especially with a traditional timber sale contract.** **On this sale, we suggest adding in limited extra marking to retain some clusters of overstory trees and break up the DxD in the LSR units and the Riparian Reserve treatment areas. (Several other modifications to a DxD were listed on page 4.)**
	The variable density thinning within these stands is the best economic method to balance both a timber commodity need and provide for other resource needs.
Comment Letter, page 5	**We recommend that skips in unit 10, and other units as applicable, be placed so as to preserve the largest remnant snags with the greatest habitat value. Furthermore, the EA noted that snags will only be created in two (units 2 & 12) of the 11 units in the project (EA, pg. 10). Given the ecological importance of snags, we recommend that some level of snag creation occur in at least 2/3 of the units.**
	There are no large remnant snags in these units since they were all clearcut previously Snags would be created in three units: 2, 3, and 12 (EA Appendix A). These units, in general have the larger trees, and Unit 3 is in LSR. In the other units, the trees are generally smaller making any created snags less valuable for wildlife, and unlikely to stand as long. Snags would be created naturally in all of the units inside the "skips". Normal stand dynamics, including tree mortality due to overcrowding is expected to continue in the areas that are not thinned.
Comment Letter, page 5	**The EA states that units 2 and 3 are 42 and 39 years in age respectively (EA, pg. 67). This conflicts with Forest Service GIS data which puts the majority of the two stands at 105 years of age. We would like clarification as to the age of the units.**
	These stands were originally regenerated in the Siouxon burn in about 1902.

	However, the portions of these stands that make up Units 2 and 3 were logged and regenerated artificially in the 1960s. The age that is shown in the EA is correct.
Comment Letter, page 5	**While the design and location of temporary roads may minimize impacts associated with roads, these roads and associated landings will have significant short, and potentially long term, effects to soil productivity, spread of invasive species, connectivity for low mobility species, and canopy structure (Forman and Alexander 1998, Gucinski et al. 2000), in addition to the hydrological impacts discussed in the EA.**
	There will be impacts from the use of temporary roads and these effects are identified in the EA. The effects to soil productivity are addressed in the EA beginning on page 25. The construction of temporary roads and landings does have the potential to cause invasive plant establishment and spread, and reduce habitat connectivity for desirable native plant species. These impacts were analyzed in the invasive plant risk assessment (EA, page 94) and botanical Biological Evaluation (BE). Effects to salamanders and mollusks, which are low mobility species are described in the wildlife effects section beginning on page 94. As a result of these analyses, project design features have been prescribed, and mitigations recommended, in order to minimize the short and long term impacts of the road and landing construction (Appendix A, Project Design Features and Mitigations).
Comment Letter, page 6	**The description of road decommissioning specifications in Appendix A is very thorough and provides concrete implementation benchmarks. Our only question is whether grass seeding is necessary or whether covering temp roads with logging slash and downed logs is preferable in terms of allowing native understory species to re-colonize these sites.**
	Seeding with native grasses is recommended in order to expedite the establishment of the native plant community, help prevent the establishment of invasive plants, and to help stabilize the soil at disturbed sites. According to the Pacific Northwest Region Invasive Plant Program Record of Decision for Preventing and Managing Invasive Plants (2005), as well as the Gifford Pinchot National Forest Native Plant Policy (2000), native plant materials are the first choice in revegetation for restoration and rehabilitation.
Comment Letter, pages 8, 9	**In unit 3, it is not clear why building over 3000' of road is necessary. From a straight GIS vantage point, much of the unit could be yarded from the 5700 road with yarding distances staying under a 1000' maximum and 600' average. A short spur into the unit may be needed, but is the whole road necessary given all the tradeoffs?**
	If it is determined that the entire 3000' feet of temporary road is not needed it will be reduced during layout. A 1000 foot yarding distance would result in more damage to the old skid trails, especially close to Forest Service Road 5300. It would also increase the logging cost of yarding this young, small size wood to a log landing.
Comment Letter, page 9	**In unit 10, it appears on the ground that the road will extend to the back of the unit and may be longer than is shown on the map in the EA. It also appears to cross an intermittent stream and a wet area, which are not mentioned in the EA and conflicts with what is described on page 37 of the EA. We would like clarification as to the length and location of the proposed road in unit 10 and,**

	if it crosses an intermittent stream and wet area, what hydrological effects are expected.
	The 800-foot figure on page 12 of the EA is correct, and all of the road will be within an existing temporary road prism that was built when the stand was originally harvested approximately 30 years ago. During initial layout of Unit 10 a small intermittent stream was found. This stream flows up to the temporary road and does not cross the road. A 60-foot no-cut buffer was marked along both sides of the stream, but no culvert would be necessary.
Comment Letter, page 9	**We are concerned about the impacts of the stream crossing in unit 12. We would like to see an evaluation of alternative ways of yarding this unit that avoid this stream crossing.**
	The entire unit was initially considered for helicopter logging, but the consensus among those with expertise in logging systems was that the limited acreage combined with relatively small diameter trees would make harvesting this unit by helicopter economically infeasible. The temporary road for Unit 12 is 0.8 mile long and would be mostly located within the remnant road prism (EA, page 37). The new stream crossing would be built 50 feet upstream from the old crossing in order to avoid reopening a road section that runs directly adjacent to the creek for 50 feet, and to avoid creation of a tight ninety-degree corner. This new road section would be located to connect the sections of existing old road prism at a gentle grade. Project Design Criteria and Best Management Practices used in the design of the new temporary road and crossing would minimize the erosion and sediment delivery to the small perennial non-fish bearing streams (EA, page 64). As far as impacts to fish species, the *road crossing will have a short-term negative impact to the immediate riparian area and local ground conditions, but is expected to only last one year (Fisheries Biological Evaluation).* Fish bearing streams below Unit 12 would be unaffected by the small quantity of delivered sediment. This entire new section of temporary road, as well as the old road prism that would be reopened will be decommissioned prior to the wet season of the same year it is constructed. *Upon completion of thinning activities and prior to November 1, the culvert will be removed and connectivity reestablished.*

Donald and Alice Hack

Comment Letter, page 1	**The plans look appropriate, but we do wonder about how thin you intend to harvest. Most of our observations of recent thinning projects are far too drastic leaving understory too exposed to wind and sun causing drying of soil. This in turn slows growth of remaining trees and adds to potential for wildfires.**
	Of the 553 acres proposed, the following acres and approximate canopy cover will be left after treatment:

	402 acres – 40% canopy cover 55 acres – 30% canopy cover 22 acres – 5% canopy cover 74 acres – 80% canopy cover A 2% per year canopy cover recovery rate is expected within the treated acres. Thus a 40% canopy retention unit in 2008 will be approximately 60% in 2018 (EA, page 71). A link between drying soil (unless it were extreme) and slowing growth of trees is speculative, especially in the abundance of moisture in the area. In either case, the thin would not cause changes to the soil moisture regime.