## Appendix 1 – (continued)

## Comments received during the 30-day comment period (Ending July 24, 2002)

17. Concern: The Survey and Manage Plan of 2001 deleted *Hydrotheria venosa* a species found in the Orchard area. Dropping the modifications made for *Hydrotheria venosa* will drop the level of environmental protection below the minimum required threshold as ruled by Judge Dwyer when the Northwest Forest Plan (NFP) was first implemented.

Response: The presence of *Hydrotheria venosa* was noted in the original EA. It is found in a stream in the riparian reserve. No modification to the proposed action had to be made at that time since it was adequately protected inside the riparian reserve. When the species was delisted, no changes were made to the nearby units, therefore the species is getting the same level of protection now even though it is no longer listed as a species requiring the management of known sites.

18a. Concern: How can planning costs go down when additional work such as surveys has been done since then?

Response: The first EA contained an estimate of administrative costs based on regional averages. Administrative costs are projected for the entire life of a project and include costs for tasks that have not yet occurred such as tree marking and sale administration. Regional average costs are periodically updated. The administrative cost for the no-action alternative shown in the first EA was adjusted downward for the second EA because some post-EA costs were inadvertently included. Cost estimates for surveys for survey and manage species were included in the first EA.

18b. Concern: Our research indicates that lumber selling values have gone down between the second quarter of 1999 to the present. They have not gone up as the new EA suggests.

Response: Lumber values fluctuate regularly. There is also a time lag between when an economic analysis is done and when an EA is published. The value of an economic analysis is to show a relative comparison between alternatives. Even as lumber values fluctuate, the relative difference between the alternatives can still be demonstrated. After cruising to get accurate volume and value figures, an appraisal would show a more refined picture of the economic viability of the project right at the time of bidding. If the lumber market is low at that time the sale may be delayed until market conditions improve.

18c. Concern: The economic analysis did not include the positive effects of the no action alternative such as flood prevention, increased water quality, recreation and reduction of global warming.

Response: Hydrology and water quality were addressed for the no action alternative (EA pages 16 to 20). The degree of risk is very low for this project. The proposed action is designed to provide for long-term health and stability of watersheds. In terms of recreation there is very little use by the public because there are no maintained trails, no open roads and no destination features. Global warming is outside the scope of project analysis.

18d. Concern: The economic analysis did not show the negative social impacts of the action alternatives such as increased cost to filter water, environmental cleanup after a flood, increased cost to the public to construct and maintain new roads.

Response: There would be no increase filtration cost or flood risk (EA page 16 to 20). Road costs are included in the economic analysis (EA page 22 and EA appendix sections I and K).

18e. Concern: It is not apparent that the benefits equal or exceed the costs. The proposed action does not maximize net public benefits.

Response: Not all benefits or impacts have been quantified in dollars in the economic analysis. Other benefits and impacts have been described in text.

19. Concern: We disagree that girdling trees in the riparian reserve (with alternative D) would pose a serious bark beetle epidemic risk. They would help provide coarse woody debris.

Response: The number of trees that would have to be girdled or felled to achieve a thinning objective would be sufficient to attract beetles and result in mortality of live trees. (EA appendix A9) Photo #1 below demonstrates the quantity of trees present.

Orchard Unit 3. Photo #1.

20. Concern: There should be no thinning in the riparian reserves because it will harm water quality. It will violate Aquatic Conservation Strategy (ACS) objectives. There is no discussion of the length of time that short-term sediment risks would last. There should be no skid trails, landings or roads in riparian reserves.

Response: The project was designed to protect water quality. The Water Quality Coordinator for the South Fork Water Board has reviewed the EA and made field inspections. Suggestions have been incorporated and he has concluded in a letter to the files that the timber sale "should not have any adverse affect on the water quality in the Clackamas River."

The Northwest Forest Plan (page C-32) indicates that timber harvest is appropriate in riparian reserves where silvicultural practices are designed to control stocking and acquire desired vegetation characteristics to attain ACS objectives. Thinning in riparian reserves would improve stand health and vigor and would result in larger trees and a stand with greater diversity, all of which meet ACS objectives. Consistency with the ACS objectives is documented in the EA appendix pages D17 to D41 and summarized in the EA on page 18. Thinning would occur in the dry upland portions of the riparian reserves. Photo #2 shows the dry upland vegetation in the riparian reserve portion of unit 1.

Photo #2

Short-term sediment risks would gradually decrease after road decommissioning and after erosion control measures take effect (EA page 17). There would be no skid trails, landings or roads constructed in riparian reserves.

21a. Concern: The ten-foot buffers for fertilizer application is not wide enough. Fertilizer can run off into streams causing eutrophication, fish die-off and polluted drinking water.

Response: There will be no logging disturbance near streams. The project includes no-cut buffers that are custom designed to protect riparian resources. The concern statement is a reference to a standard design criterion (5a on EA page 10) that is included in all projects. Fertilizer is often used to aid in the establishment of grass for erosion control on bare soils that may occur during road construction at culvert installation sites. In this project, the only sites that are likely to need fertilizer are on landings and roads at the time of obliteration; these areas are not near streams. This project does not include a stand-wide fertilization for growth enhancement. Forest-level monitoring of nutrients in water is conducted and in the past, no problems have been documented related to fertilizer application for erosion control.

21b. Concern: Fertilizer can degrade diversity, biomass, community structure of soil organisms that comprise the soil foodweb. Fertilizer interferes with nutrient cycles. See Nanipeieri et. al., 1990. Ecological Significance of the biological activity in soil. Soil Biochemistry 6: 293-355.

Response: The referenced document describes methodology for measurement of microbial activity in soil and contains no analysis of fertilization of forest soils. This project does not include a stand-wide fertilization for growth enhancement.

22. Concern: A road should not be built in the LSR because it will harm spotted owls and degrade the quality of the LSR. The NFP does not support road building in an LSR for a project outside the LSR.

Response: The Northwest Forest Plan page C-16 indicates that new roads in the LSR should be kept to a minimum, routed through non-late-successional habitats where possible, and designed to minimize adverse impacts. Alternatives B and D would build a temporary road from the end of road 4500-242 into unit 1. All of road 4500-242 and approximately 200 feet of the new temporary road are in the LSR. The analysis shows that the temporary road would have a neutral affect to the LSR (EA page 21, EA appendix page G2). The proposed temporary road passes through a second-growth stand that has already been thinned. The road does not pass through late-successional habitat, it would be kept as narrow as possible, and the trees that would need to be cut would be left for coarse woody debris. The new road (plus ¾ mile of existing road that lead up to this new road, also in the LSR) would be obliterated and revegetated after project completion. In addition, alternatives C and E were developed to explore other options such as helicopter logging and building a longer road on steep slopes that avoids the LSR. Photos #3 and #4 below shows the LSR road alignment. Photo #3 was taken from the existing road and looks along the road alignment toward Unit 1. A total of 36 trees on this road alignment (near the orange hard hat) would be cut. The dark, dense stand edge is the boundary between the LSR and Unit 1. Photo #4 is shifted 90 degrees and shows the same area looking along the LSR boundary with the already thinned LSR to the right and Unit 1 to the left.

Photo #3

Photo #4

23. Concern: We dispute the claim (alternative E) that a road alignment that avoids the LSR would be on slopes of 40 to 50%. The top of the unit is relatively flat; a road could be built there.

Response: The ridge at the top of unit 1 appears gently sloped. It was examined for its potential for a road location but the road grades would be far too steep for a road designed to haul log trucks up an adverse grade. There are slopes of 20 to 25 percent in places on the ridge top making this road location infeasible. Road grades of 15% are feasible if they are interspersed with more gentle gradients. The two potential road locations shown on page 14 of the EA are viable options.

24. Concern: There should be no road construction. The Forest already has too many roads. The EA fails to adequately disclose the impacts of road construction. There is not enough discussion of the permanence of the proposed roads.

Response: The temporary roads are proposed to access landings for tractor and skyline logging. The roads would be built on gently sloping stable landforms and would cross no streams. They would be obliterated and revegetated upon completion of the project. The impacts have been addressed in the EA on pages 17 to 28. Alternative C was specifically developed to address this concern. There would be no road construction with alternative C. All of the action alternatives propose to obliterate and revegetate newly constructed temporary roads and road 4500-242. Photo #5 below is an example of an obliterated road (6350-250). The surface has been reshaped to allow appropriate drainage of surface water, grass has been established, and a berm installed. Within a few years, trees will be growing. While a road alignment

such as this will be evident for many years, the impacts to resources will quickly diminish.

Photo #5

25. Concern: The EA should clearly state the current state of the roads to be reconstructed and the exact mileage and location of road reconstruction.

Response: The roads analysis (EA appendix section K) contains some of this detail. A separate EA (Restoration 2001) has already documented the effects and benefits of reconstructing road 45. The Orchard project is one means to pay for a portion of this reconstruction.

26a. Concern: None of the alternatives are reasonable. The Forest Service should instead thin young plantations along existing roads.

Response: Alternatives were developed to address the issues raised during scoping. The thinning of young plantations elsewhere is being considered under a separate EA.

26b. Concern: There should be an alternative that enhances the environment. There should be an alternative that includes only the road obliteration with no commercial harvest.

Response: Reasonable alternatives need to meet the purpose and need, (EA page 5). Alternative were examined (A, C, D and E) that would have reduced environmental effects compared to alternative B. An alternative that would obliterate road 4500-242 with no commercial timber harvest is within the

range of alternatives considered. The decision maker has the discretion to approve the road obliteration without the timber sale.

26c. Concern: There should be a restoration only alternative with no commercial logging. The profit motive corrupts land management decisions.

Response: The proposed action is a restoration of stands to greater health and productivity including timber production. The sale of timber is one means of using the value of the timber to offset the cost of accomplishing needed thinning. Management direction for this area is designed to meet the goal of providing lumber, wood fiber, and other forest products (Mt. Hood Forest Plan page four-289). The NFP also has an objective of providing a sustainable supply of timber and other forest products to help maintain the stability of local and regional economies (NFP page A1). If profit or maximizing income were primary objectives the proposed action would include cutting the largest trees or using the least expensive logging system. See also response to Concern 26b.

26d. Concern: In terms of wildlife and cumulative effects, the range of alternatives is inadequate and the discussion of effects is insufficient. All of the action alternatives harvest in peregrine falcon, spotted owl, pine martin and pileated woodpecker, wolverine, deer and elk habitats. Logging and road construction harms these species. Because of the devastation surrounding this area, the stands should be left as refuges for dispersal of species.

Response: All of the alternatives address habitat impacts and benefits to these species combined with the impacts of adjacent existing plantations and proposed road construction. The level of impact is low, and in the long term, there will be benefits as stands will become healthy and productive. (EA pages 25 to 28) A range of alternatives has been developed to address the issues raised during scoping including a no action alternative that would not harvest timber in this area.

27a. Concern: There is inadequate analysis of impacts to soils.

Response: Impacts to soils would be within the levels set by Mt. Hood Forest Plan standards. (EA pages 28, and 9 to 11 and EA appendix A9) Best Management Practices are included as well as project design that incorporates seasonal restrictions and logging methods that include skyline systems on steeper slopes. All of these factors combined will result in minimal soil impacts. Total soil impact would be less than 8% (EA page 29).

27b. Concern: Regeneration harvest is rarely considered an acceptable harvest method. The EA does not describe how the proposed regeneration meets the NFP standards.

Response: Unit 2B is a site preparation and planting proposal and does not involve commercial harvest. The small trees and brush would be cut, piled and burned (EA page 32). Soil standards would be met (EA page 29). Green tree retention standards would be met (EA page 6). Photo #6 below shows the small, dense, and mistletoe infected trees of unit 2B.

Photo #6

28a. Concern: There is no definition of thinning. How many trees would be removed and how many would remain? How do we know if you will take more trees than necessary or if you will take the big ones? How can the public comment when the leave trees or cut trees have not yet been marked? There should be more detail in the EA.

Response: EA appendix section A has a detailed description of the thinning and the objectives. The prescribed treatment is a thinning from below which means that in general the smaller trees would be removed and the larger trees retained. Approximately 50% canopy cover would be left. (EA appendix page A11). Photo #7 below shows an example of a completed thinning (Fork unit 3) adjacent to Orchard unit 1. This stand has the same age as the Orchard units since they originated after the same wildfire approximately 80 years ago. Fork unit 3 was thinned in 1997 with 5 growing seasons and 5 winter storm seasons between then and the time the photo was taken (8/2002). The Orchard thinning would look similar.

Photo #7

28b. Concern: How can the public comment when there are no unit boundary markers? How do we know how wide the no-cut riparian areas would be?

Response: Maps included in the EA indicate where the units are located. Some unit boundaries have been flagged with blue ribbon to facilitate survey efforts. The custom designed no-cut riparian buffers have been flagged.

29a. Concern: Please don't harvest old growth. Don't cut any trees over 80 years of age.

Response: There is no old growth harvest in any of the alternatives. The stand age is approximately 80 years. The thinning will result in some trees over age 80 will being cut to achieve the desired spacing. Photo #8 (Orchard Unit 3) shows typical stand conditions.

Photo #8

29b. Concern: It is no longer scientifically acceptable to log trees over 80 years of age. Refer to a September 4, 2001 letter signed by scientists. Your EA did not include this latest science.

Response: The referenced letter was examined and does not present new scientific information. The letter expresses the opinion of scientists, that a different alternative (such as alternative 1) should have been selected for the Northwest Forest Plan. The arguments put forward in this letter and the impacts to harvesting stands over 80 years of age are not new and have been addressed in the NFP.

29c. Concern: The best science should be used. The EA has not addressed the numerous new scientific studies over the past four years.

Response: The comment did not identify any specific new scientific findings. A summary of pertinent scientific literature is included in EA appendix section A. The studies reinforce what was already known and support the proposed action.

30a. Concern: The purpose and need is flawed. Instead of treating trees like crops, the health of the entire ecosystem should be addressed.

Response: The purpose and need for this project fit with the direction of the Mt. Hood Forest Plan as amended by the Northwest Forest Plan. The watershed analysis also looked at the broader ecosystem and recommended thinning in second growth as part of a landscape-wide ecosystem approach to forest management.

30b. Concern: The purpose and need for riparian areas is flawed. Healthy ecosystems consist of more than just big trees. There is no discussion pertaining to riparian reserves about how the effects of logging on soil health or the nitrogen cycle disruptions caused by fertilizer.

Response: The EA page 5 indicates that the objectives for riparian reserves are more than just big trees. Health and windfirmness are other important considerations as well as the development of structural diversity. Soil impacts are discussed on EA pages 17 and 28 and EA appendix A9. Refer to response 21a and b for discussion of fertilizer.

31. Concern: The project violates the NFP because it continues to use the C-1 Timber Emphasis land allocation from the Mt. Hood Forest Plan. This timber emphasis designation was extinguished by the NFP that replaced it with a "Biodiversity Emphasis." There is no command to harvest timber in the Matrix.

Response: NFP page C-39 states, "Most timber harvest and other silvicultural activities would be conducted in that portion of the matrix with suitable forest lands, according to standards and guidelines." The NFP amended the Mt. Hood Forest Plan by adding certain standards and guidelines for matrix areas including survey and manage, green tree retention, and coarse woody debris. Timber Emphasis allocations in the matrix were not extinguished; the NFP did not eliminate the management goals for allocations that make up the matrix. The matrix is the primary area where commodity production is expected, but not all matrix lands are timber emphasis. The matrix also contains land allocations for recreation, big game, scenic areas and other multiple uses. However, all matrix lands in this project are C-1 Timber Emphasis (EA page 3). Neither the NFP nor the Mt. Hood Forest Plan command timber to be cut in the Orchard area; the EA does not make this claim. Timber is being harvested to achieve Forest Plan goals, (EA page 5).

Assertions concerning the role of biodiversity in matrix are incomplete and taken out of context (NFP page B6). The complete text states, "Stands in the matrix can be managed for timber and other commodity production, and to perform an important role in maintaining biodiversity. Silvicultural treatment of forest stands in the matrix can provide for retention of old-growth ecosystem components such as large green trees, snags and down logs, and depending on site and forest type, can provide for a diversity of species. Retention of green trees following timber harvest in the matrix provides a

legacy that bridges past and future forests." The alternatives have been designed to incorporate these standards and guidelines.

32. Concern: There is no mention of project level monitoring. How is the required monitoring being implemented?

    Response: Monitoring of projects is conducted at the forest level and is summarized each year in the Mt. Hood National Forest Annual Monitoring Report. Standards and guidelines have been incorporated into the project and into design criteria. Timber sale contracts are monitored and compliance is documented by sale administrators.

33. Concern: Language (design criteria EA pages 9 to 12) is too week to be enforceable. Mitigations that say "where possible" reveal your bias towards cutting trees despite damage to old growth and riparian resources.

    Response: The language in the design criteria has been intentionally crafted to provide direction with flexibility to accommodate site-specific circumstances. The language has also been coordinated with the National Marine Fisheries Service as a part of consultation. (EA appendix pages D25 to D27)

34. Concern: The public has no real need to have fast growing trees, overcrowding will take care of itself.

    Response: Growth and health is a primary objective on these lands.

35. Concern: Reusing the old logging roads will destroy the alders that have sprung up in the road.

    Response: Alders and other vegetation would be removed from the road surface as part of road maintenance. Alders would likely reseed after the project is complete.