APPENDIX 2: Response to Comments

Resource Area	Scoping Comment	Response to Comment
Healthy Forest Restoration Act	Indeed, as this project is planned under the auspices of the Healthy Forest Restoration Act (§102(e)(2)), the Forest Service must follow the Act's command: "The Secretary shall fully maintain, or contribute toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth condition characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health, and retaining large trees contributing to old growth structure." Congress specifically intended for HFRA projects to retain existing older forest structure that existed prior to fire suppression, and Bark strongly suggests that the Forest Service establish an upper-diameter or age limit on logging, to ensure removal only of trees that are actual fuel hazards.	The Healthy Forest Restoration Act (HFRA) (H. R. 1904-8) requires that projects designed under its authority fully maintain, or contribute toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health, and retaining the large trees contributing to old growth structure. This project would retain the structure and composition of pre-fire suppression old growth by promoting fire-adapted species where their health condition does not threaten the overall health of the stand. HFRA provides that old growth direction in the Northwest Forest Plan Record of Decision is sufficient to meet the requirements of the Act.
	HFRA requires restoration of old growth conditions and maximum retention of large trees. We also urge the FS to retain all old trees regardless of size. For instance, some old pines are small and suppressed yet very resistant to fire and ecologically valuable and should be retained.	See response above comment for old growth conditions. Large tree retention: HFRA Section 102(f) states that projects should be carried out in a manner that "(A) focuses largely on small diameter trees, thinning, strategic fuel breaks, and prescribed fire to modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildfire effects for the forest type (such as adverse soil impacts, tree mortality or other impacts); and (B) maximizes the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands." The proposed treatments meet this requirement by retaining large trees suitable to the site in mature stands, and reducing stand density that has increased since the exclusion of fire. Large trees would be retained where they do not threaten the overall health of the stand. HFRA states that the large tree retention requirement must not prevent agencies from reducing wildland fire risk to communities, municipal water supplies, and at-risk Federal land.

Resource Area	Scoping Comment	Response to Comment
Healthy Forest Restoration Act (continued)	Treatments in the wildland urban interface may also be a priority, but don't define the WUI too broadly, because fire hazard can be reduced by treating the area immediately adjacent to structures and this home ignition zone is usually on non-federal lands. The WUI fire problem should be framed as a home-ignition problem and the solution for that lies with the private property owners.	The Proposed Action focuses on treatments within the City of The Dalles Municipal Watershed, which makes it eligible for analysis under the Healthy Forest Restoration Act as described in Section 102(a)(2). This section lists the following as an authorized project "condition class 3 Federal land, in such proximity to a municipal water supply system or a stream feeding such a system within a municipal watershed that a significant risk exists that a fire disturbance event would have adverse effects on the water quality of the municipal water supply or the maintenance of the system, including a risk to water quality posed by erosion following such a fire disturbance event." As such, this project does not proposed treatments in any wildland urban interface, but focuses on the municipal watershed.
NEPA Process	Given that this will still be a fire prone environment, and the treatment won't necessarily prevent a severe wildfire, the Forest Service & The Dalles still need to prepare for a fire/sedimentation event. What, besides the proposed project, is being planned to address this issue?	The National Environmental Policy Act defines "mitigation" as avoiding, minimizing, rectifying, reducing, eliminating or compensating project impacts. Section 2.2.3 contains a list of project design criteria and mitigation measures that are an integral part of this project and would be carried out if the project. In most cases, the effects analysis in Chapter 3 is based on these design criteria and mitigation measures being implemented.
	Include an action alternative that does not include commercial logging. Bark has almost universally seen Forest Service "restoration" projects that include commercial logging be driven by values other than truly restoring ecosystem health. As noted earlier, the trees that are most commercially valuable are the very same trees that provide the best habitat and are the most fire resilient. We strongly advocate for an alternative that does not include commercial logging, and is wholly focused on science-based fire restoration.	Section 2.3, Alternatives Considered, but Eliminated from Detailed Study includes the consideration of an alternatives does not include any commercial logging. This alternatives was eliminated from detailed analysis because it does not meet the Purpose and Need for Action as stated in Section 1.3. Specifically, it does not change the existing fire condition class or move younger stands toward a more historic condition; nor does it reduce the risk of large stand replacing wildfire events in the watershed because the stands would remain overstocked and the risk of catastrophic wildfire would not be reduced.
	Use adaptive management and monitoring to assess management success of Phase I before taking new action. Adaptability and accountability require that a high funding priority be given to monitoring programs that compare expected outcomes with objective measures of results. To that end, before moving forward with Phase II, the Forest Service should engage in extensive monitoring of Phase I and incorporate that information into the planning of Phase II. Please ensure adequate funding – not tied to	The Dalles Watershed Fuelbreak (Phase I) was fully considered by all resource areas in the cumulative effects analysis contained in Chapter 3. For more information on funding, see response to funding comments on page Appendix 2-17.

Resource Area	Scoping Comment	Response to Comment
NEPA Process (continued)	commercial extraction – for ongoing ecosystem restoration and long-term fire resiliency in the watershed.	
	We urge the FS to consider more than one action alternative because that will foster more informed decision-making, help illuminate and reconcile trade-offs, and result in a better decision. We suggest an alternative that focuses on ways of retaining and recruiting desired levels of dead wood in riparian reserves and uplands by planning and retaining adequate levels of untreated "skips" to meet targets for dead wood recruitment over time. It should be recognized that retention of large dead wood is not necessarily adverse to fuel reduction objectives because large wood usually stays wetter longer than small wood, and if treatments reduce the spatial continuity of fuels then discontinuous islands of abundant dead wood can be maintained well-distributed across the landscape to meet terrestrial and aquatic habitat, and hydrologic objectives.	The Healthy Forest Restoration Act (HFRA) (H. R. 1904-8) is designed to reduce the number of alternatives considered in the analysis process. Section 104(c)(1) states that only the no action and Proposed Action need to be considered. The analysis of an additional action alternative is only required "if the additional alternative (i) is proposed during scoping or the collaborative process under subsection (f); and (ii) meets the purpose and need of the project, in accordance with regulations promulgated by the Council on Environmental Quality." The proposed focus of an additional alternative has all be considered and incorporated into the Proposed Action, specifically by implementing variable density thinning. As such, this project is not required to analysis another action alternative and has met the HFRA regulations.
	When conducting commercial thinning projects take the opportunity to implement other critical aspects of watershed restoration especially reducing the impacts of the road system and livestock grazing and establishing the ecological processes that foster recovery of hydrologic systems and fire.	Restoration activities including the impacts of road system and livestock grazing, are outside the scope of this project. The scope of the project is defined for the Purpose and Need for Action as described in Section 1.3.
Forest Plan Standards & Guidelines	Concerned by possible violations of Mt. Hood Forest Plan standards that 15 tons of dead and down woody debris per acre be retained, that 6 logs per acre in decay classes 1, 2 and 3 be retained, and that snags and green reserve trees be left to provide at least 60% of maximum biological potential of primary cavity nesting species.	Currently, most areas are below 2 percent cover of down wood and therefore are below the 30 percent tolerance level for wildlife habitat. As a result of this project, the recruitment of down wood would be delayed because of the reduction in density of the stands which would reduce the levels of suppression mortality. Although some trees with elements of wood decay would be left to provide habitat for snag-dependent species; fewer new snags, trees with elements of wood decay, or down wood would be recruited for the short to mid-term. In the long term, trees would be larger compared to no action, and some would eventually die and become large snags and some would eventually fall naturally to create large coarse woody debris. See Section 3.7, Wildlife Resources for more details. Exceptions to these standards are required to meet the purpose and need of effective fuel reduction. These exceptions were identified during the interdisciplinary planning analysis and the IDT process concluded that these exceptions were within the purpose and need for action.

Resource Area	Scoping Comment	Response to Comment
Forest Plan Standards & Guidelines (continued)	Regarding the standards relating to organic matter (FW-033), down wood material (FW-219) and snags (FW-215), Bark is curious as to why these will not be met. Is it because there are already too little down woody material and/or snags in the project area, or is it because this project would effectively rake the ground clear of "fuel", and fell more wildlife trees than otherwise allowed? If the answer to the latter question is yes, Bark is very concerned that this project will excessively remove essential wildlife habitat and nutrients from the forest and requests a thorough discussion of the reasons behind, and impacts of, such action.	For down wood material, see response to previous comment. For snags (FW-215), implementation of the Proposed Action would reduce the amount of small snag recruitment that would have occurred through the process of stress and mortality in the next 20 to 30 years. Some of the snags and downed logs that might have formed from the death of the intermediate and suppressed trees would be removed by thinning activities. As a result the attainment of moderate-sized snags and down wood would be delayed because of the reduction in density of the stands which would reduce the levels of suppression mortality. For organic matter (FW-033), it is likely that some localized acreage would be lower than the Standard and Guideline. This is most likely to occur on south facing soils where treatments are proposed (soils 2, 5, 7 and 8). When this occurs, it is not expected to be a substantial impact to nutrient cycling due to the following: these are not clearcuts followed by intense burning and extreme loss of current and future organic matter; the shape and extent of some of the impact is narrow and discontinuous; and many of the soils impacted would retain sufficient organic matter reserves in the remaining standing trees and mineral topsoil due the way in which they have developed. In order to meet the Purpose and Need for Action, the project would not meet Forest Plan Standard and Guideline FW-033 and FW-215. These exceptions were identified during the interdisciplinary planning analysis and the IDT process concluded that these exceptions were within the purpose and need for action.
	The LRMP directs that prescribed fire may occur in the RNA, but prohibits other fuels treatment, unless required to provide protection to adjacent non-RNA acreage. (LRMP at 4-150, emphasis added). Bark believes that the RNA should be left untouched to the greatest degree possible to allow it to meet its purpose as an "unmodified" natural ecosystem. Is the Phase II management plan for the RNA limited to prescribed fire? If not, how has the Forest Service determined that other fuels reduction in the RNA is required to protect the adjacent acres?	The Proposed Action as described in Section 2.2.2 meets the Standards and Guidelines for Research Natural Areas (RNA), including A3-047 and A3-048. The only treatment proposed within the RNA is jackpot underburning.

Resource Area	Scoping Comment	Response to Comment
Public Involvement	I request that the Forest Service host another site visit before the Environmental Assessment is complete to increase the public's ability to provide more site-specific input during the project planning process.	Two field trips were held for this project as part of the collaboration process. The field trips occurred on October 1, 2010 and October 6, 2010. The field trips visited proposed treatment sites as well as completed sites for comparisons. No additional field trips are planned at this time.
	Foremost I would like to see site-specific input from outside experts; non-government personnel. I'm sure the Sierra Club, Bark, PSU, or other environmental/academic organizations could supply scientists to survey the area, free of cost. As it is unlikely the Forest Service has staff enough to survey the rather large planned treatment areas, these additional staff could help provide valuable survey information. Please allow access to the proposed treatment areas within the Dalles Watershed to outside agencies.	The project area has been surveyed by the interdisciplinary team. The results of the surveys as well as the impacts of the Proposed Action for each resource area have been disclosed in Chapter 3. The watershed is closed to public access to protect the municipal drinking supply for the City of The Dalles. The Barlow District Ranger can gather access on a case-by-case basis. No request for access has been requested at this time.
	Are the citizens of the Dalles aware of what's going on? I understand that The City of Dalles prompted the project, but are the laymen and citizens of the area aware of the risks vs. benefits of the Phase II proposal?	The scoping letter was distributed to 152 individuals and organizations, including citizens in The Dalles and surrounding communities. In addition, a legal notice during the scoping period was published in *The Oregonian* and the information was available on the Mt. Hood National Forest public website (www.fs.usda.gov/goto/mthood/projects). Also, the project was discussed in a collaborative process beginning in August 2010 through December 2010. The collaborative process included 5 meetings and 2 field trips. A letter was distributed to 45 individuals and organizations, including citizens in The Dalles. Also, the Mt. Hood National Forest website was used to announce and invite citizens to attend the collaborative process.

Resource Area	Scoping Comment	Response to Comment
Fuels Reduction Activities	We appreciate the need to burn in the watershed. But there should be "biological bridges" between the present dense stands and the more open forest which is the goal of the project. Have you considered a more intensive treatment on fewer acres at a time, spread out over several years? What about treating 600-800 acres at a time? The idea would be try to get "natural conditions" right away on a small part of the watershed. One could do another adjoining block six or eight years later. At the same time the second block was being treated the first block could be prescribe burned again. This would imitate a natural fire regime interval of seven years. Fuels reduction on successive blocks would repeat the pattern, with ever larger areas of prescription burning. The untreated areas would be refugia for organisms which might be reduced or eliminated in treated areas. As treated areas recovered a more natural dynamic organisms could colonize them from the refugia. Ultimately natural ignitions could be allowed to take over the job or maintaining the mosaic of habitat types throughout the watershed.	Mosaic burns, as described here, are one of the end results that this project is striving to achieve. Mimicking natural fires would create a mosaic burn where fires would burn in one location during the initial burn, but may not burn in the second burn. For more information on history of mosaic burning within the project area as well as the effects on prescribed burning this watershed in a mosaic pattern see Section 3.1, Fire and Fuels Management.
	What is the Forest Service's plan for managing post-logging slash? What guarantee is there that it will all be "cleaned" up?	All fuels within the treatment units, including post-logging slash, would be reduced to 5 to 10 tons per acre to meet the purpose and need for action as defined in Section 1.3. This would be achieved through a variety of fuels reduction techniques as described in Section 2.2.2, Proposed Action. One of the primary mechanisms would be whole tree yarding as a method is used to harvest trees. For the commercial logging units, a mechanized feller buncher or similar machinery, restricted to designated skid trails, or cable systems on steeper slopes would be used to remove any vegetative material to meet silvicultural and fuels needs. The tops and limbs are left attached to the last log of each tree as it is yarded to the landing. The tops and limbs are machine piled and burned at the landing or utilized as chips or fuel wood.
	How will the Forest Service follow up with the project area in the future? As prescribed burning is likely to happen at a time of year when all fuels won't burn off, what guarantee is there that follow up treatments will take place?	The Proposed Action would be implemented as described in Section 2.2.2. Any future actions within the project area would be subject to additional environmental analysis as required under the National Environmental Policy Act (NEPA).
	What are the Forest Service's long-term plans for managing the perimeter fuel break created in Phase I *and* the new project area proposed for Phase II?	

Resource Area	Scoping Comment	Response to Comment
Fuels Reduction Activities (continued)	The unavoidable adverse impacts of logging and roads must be balanced against the rather uncertain benefits of fuel reduction. Fuel reduction has little or no beneficial effect on low severity fires (controlled by favorable weather conditions) or on high severity fires (controlled by unfavorable weather conditions). There is actually a very low probability that moderate intensity fire will affect any given stand during the relatively brief time period that fuel hazard is alleged to be reduced. Please disclose the realistic probability that desired outcomes will occur based on (1) whether fire is likely to occur when the fuel treatments are likely to be effective, and (2) if fire does occur, whether there will be a good match between (A) the actual forest type and fuel treatment type, and (B) the actual probability of favorable weather conditions and fire conditions for that forest type and treatment type. Depending on these variables, fuel treatments may have little influence on both low intensity fire and extreme high intensity fire, leaving only a small subset of well-matched fuel treatments and fires, and a low probability that the proposed treatments will have ecological benefits that exceed ecological impacts.	Section 3.1 includes a Fire and Fuels Management analysis that discloses the adverse and beneficial impacts associated with implementing the Proposed Action, including all fuels reduction activities.
	How quickly after thinning will the remaining slash and ground fuels be treated? Will FS staff be returning to the area regularly to keep the fuel break clear?	Activity slash would be treated within 2 to 4 years after thinning is done. As budget is available successive treatments should be every 7 to 15 years.
Fire Regime	Before taking action to restore fire in western forest ecosystems, the Forest Service must have a sound understanding of the historic fire regime and the potential effects of EuroAmericans on the fire regime and forest conditions.	Three historic fire regimes (Agee 1993) are thought to have existed in the Dalles Watershed, Analysis Area, low severity, Fire Regime I (Pine-Oak) and mixed severity, Fire Regime III (dry climate Douglas Fir), and moist grand fir/mixed conifer. Fire regimes and condition classes and the history within the watershed are discussed in more detail in Section 3.1, Fire and Fuels Management.
	. . . Different locations of the same forest ecosystem type have had different historic fire regimes for a variety of reasons: subtle differences in climatic seasonality, lightning patterns, understory characteristics, site productivity (related to geology, soils, and/or climate), and potentially use by Native Americans. (Veblen, 2003). The Forest Service should conduct unique fire regime research for each particular area in order to evaluate the general applicability of the fire exclusion/fuel buildup viewpoint.	

Resource Area	Scoping Comment	Response to Comment
Fire Risk	Where is the most significant threat to the watershed via wildfires? Is it realistic to do some roadside fuels reduction (where many fires start) to provide protection vs. risk and hazards even though it may be outside the watershed?	Most fires within the larger Mill Creek Analysis area have occurred outside the watershed boundaries, fairly evenly distributed from the north, west, and south directions. Due to larger, private, agricultural lands to the east, fires have been limited by the reduced public access. Fires within the watershed boundaries over the past 20 years have been limited to three events, primarily due to the restricted public access, and a possible change in weather patterns that has limited lightning occurrence within the watershed (along with a higher overall fuel moisture content). For more information on fire risk, see Section 3.1, Fire and Fuels Management. See response to the first comment on the roads section (page Appendix 2-13) for more information on roadside treatments.
Variable Density Thinning	We urge no cutting of DF, PP or WL trees over two feet in diameter. These are the future fire resistant trees of the watershed. Historically ponderosa pines grew in clumps. The proposed action seems to indicate a uniform density. Maybe this is a place for variable density thinning, especially in the ponderosa pine zone portion of the watershed.	Variably density thinning (VDT) would be used to achieve a mosaic of densities, species composition, and structure. Selected trees of all sizes down to saplings (i.e., 3-inches or less in diameter) would be removed; the focus would be on leaving the most vigorous, larger diameter trees, and favoring ponderosa pine and western larch over grand fir and severely infested dwarf mistletoe Douglas-fir. Species composition would change slightly as a result of this project, with ponderosa pine increasing in proportion within those units where it currently exists. This is because ponderosa pine would be chosen over grand fir and Douglas-fir as a leave tree whenever possible. Refer to Section 3.3, Vegetation Resources or the Effects Analysis/Environmental Consequences section of the Vegetation Specialist Report, located in the project record for more information. Additional fuels information can be found in the response to comment for Fuels Reduction above and in Section 3.1, Fire and Fuels Management.
	New evidence indicates that far more of the “dry” forests, rather than being typified low severity fire regimes, were in fact dominated by mixed severity fire regimes (including significant areas of stand replacing fire), so mixed severity fire is an important part of the historic range of variability that should be restored. The goal should not be a uniform low severity fire regime, but rather a wide mix of tree densities in patches of varying sizes. This objective can often be met by allowing natural fire regimes to operate, or by leaving significant areas untreated when planning fuel reduction projects.	
	Don’t thin to uniform spacing. Use variable density thinning techniques to establish a variety of microhabitats, break up fuel continuity, create discontinuities to disrupt the spread of other contagious disturbances such as disease, bugs, weeds, fire, etc. Retain patchy clumps of trees which is the natural pattern for many species.	

Resource Area	Scoping Comment	Response to Comment
Variable Density Thinning (continued)	The scale of patches in variable density thinning regimes is important. Ideally variability should be implemented at numerous scales ranging from small to large, including: the scale of tree fall events; pockets of variably contagious disturbance from insects, disease, and mixed-severity fire; soil-property heterogeneity; topographic discontinuities; the imprint of natural historical events; etc.	See comment above.
	We urge that the logging and burning prescriptions be applied in a mosaic pattern with many areas of various sizes "skipped" by the treatments so that large woody debris and shrubs can persist.	
Diameter Limit	The scoping notice does not discuss whether there is an upper-diameter or age limit on the trees to be logged in this project. Most fire ecologists agree that removal of large, old trees is not ecologically justified and does not reduce fire risks. Such trees contribute to the resistance and resilience of the forest ecosystems of which they are a part. Large, old trees of fire-resistant species are the ones most likely to survive a wildfire and subsequently serve as biological legacies and seed sources for ecosystem recovery. They also are exceptionally important as wildlife habitat, before and after a wildfire event, and as sources of the large snags and logs that are critical components of terrestrial and aquatic habitats.	The Proposed Action does not include any diameter limits. Diameter limits was identified as issue identified through the collaborative and scoping processes. The issue is fully described in Section 1.7, Issue. Prescriptions would meet HFRA standard and guidelines for large tree retention. See response to comments for Healthy Forest Restoration Act above.
	Will the project have an upper-diameter limit? If trees over 7” are included in the thinning prescription, what is the ecological justification?	
	Use diameter limits. The public supports the use of diameter limits because it provides a means to prevent economic values from trumping ecological values. It is often appropriate to use lower diameter limits for fire tolerant species like Ponderosa pine and Douglas fir, while using higher limits for fire intolerant species like grand fir/white fir. The exceptional circumstances in which diameter limits allegedly don’t work, are more rare than the circumstances in which refusing to use diameter limits will lead to unintended consequences, including removal of ecologically valuable trees and lack of public trust.	

Resource Area	Scoping Comment	Response to Comment
Vegetation Resources	The Mill Creek Buttes area is a very mixed ecosystem with several different forest types and fire regimes – from Ponderosa Pine dominated forests to mixed conifer stands. As there are five different fire ecology groups in the watershed, and each group contains various sub-ecologies, it is necessary that Forest Service maps adequately distinguish between these fire groups with enough detail to ensure the correct prescription in different zones.	Forested Plant Associations of the Oregon East Cascades were used to analyses analyze the effects of proposed treatments. Plant association classification describes repeating patterns of plant communities that indicate different biophysical environments. The combinations of factors such as moisture and temperature regimes, light, and soil nutrients provide habitat for a group of plant species. There are few distinct boundaries along the environmental continua. However, categorizing discrete plant associations provides a means to track and predict vegetation composition, structure, and response to disturbance. Plant association classification of forested lands has been a forest management tool for many years. Ecosystem management and concerns with biodiversity also require understanding the plant and animal habitats that occur across our landscapes. Refer to Appendix A of the Vegetation Report for Map of the projects Plant Association Group (PAG). Refer to Appendix B of the Vegetation Report in the project record for recorded stand data. The Vegetation Report is located in the project record.
	Does the Forest Service have maps and planning documents that enable sufficient precision in planning treatments? If so, please make these available in the EA.	
	If not, how does the Forest Service plan to ensure appropriate prescriptions over such a large and variable planning area?	Recent stand data was collected for treatment areas and would be incorporated into a site specific prescription for each treatment area
	I am concerned with the location of the 1,300+ acres of natural forest and 700 acres of merchantable timber to be removed. I would like to know exactly where this timber will be taken from. Will maps of these areas be made available? Will the thinning be high-graded? Will there be a moratorium on trees above a certain diameter/age? It would make sense to me that the oldest and largest trees are the most fire-resistant and ecologically valuable and should remain standing.	There are specific sites designated where timber would be removed at varying densities to meet the site needs as they coincide large tree retention and with the purpose and need of the project. Site treatment acres including maps are described in Section 2.2.2, Proposed Action. No diameter limit is proposed as part of this project, see response to comment above.
	The FS should develop restoration treatments appropriate to each forest type or plant association group (PAG). Dry Ponderosa pine forests that have significant ingrowth due to fire exclusion are good candidates for thinning. Mixed-conifer forest types often included some dense forest patches, so they should be retained at appropriate scales. Prioritize treating dry forest types at low elevation and on south slopes.	PAG was used to provide a baseline for treatment areas. Refer to the Methodology section in Section 3.3, Vegetation Resources.

Resource Area	Scoping Comment	Response to Comment
Vegetation Resources (continued)	Thin from below, retaining the largest trees, or use "free thinning" with a diameter cap so that some trees of all size classes are retained. Retain all large trees and most medium sized trees so they can recruit into the larger classes of trees and snags.	Thinning from below, variable density thinning, and retaining the largest trees are all incorporated into the Proposed Action as described in Section 2.2.2. Each of these techniques would be applied where appropriate according to forest type, structure, and desired future conditions.
	Be creative and establish diversity and complexity both within and between stands. "Gappy and clumpy" is often use to describe the distribution of trees in dry forests. Use skips and gaps within units to help achieve diversity. Gaps should be small, while skips should be a little larger. Landings do not make good gaps because they are clearcut, highly compacted and disturbed, more likely subject to repeated disturbance, and directly associated with roads. Gaps should be located away from roads and should not be clearcut but rather should retain some residual structure in the form of live or dead trees.	Skips and gaps would be used in appropriate stands to achieve the desired future conditions and to meet the purpose and need of the project. Skips and gaps would be designated on a stand-by-stand basis based on the conditions of the stand and whether it is appropriate for that stands forest type. Variable density thinning is incorporated into the Proposed Action as described in Section 2.2.2.
	Retain and protect under-represented species of conifer and non-conifer trees and shrubs. Retain patches of dense young stands as wildlife cover and pools for recruitment of future forests.	Site-specific prescriptions would address the need to retain minor species were appropriate and what those minor species are
	The effects of forest health thinning are very complex with many feedback loops. There is still a fair amount of scientific uncertainty about several critical factors relevant to a decision about fuel reduction, including: (A) uncertain rates of tree mortality and how many young trees need to be retained to ensure proper recruitment of future stands of old trees and large snags; (B) uncertainty about how much the canopy can be reduced without making the stand hotter, dryer, and windier (and exacerbating fire hazard); (C) uncertainty whether logging has any significant beneficial effect on controlling insects and diseases like mistletoe.	Density reduction within stand would be site-specific to that stand and would meet established standards and guidelines designated for that stand as described in Section 3.3, Vegetation Resources.

Resource Area	Scoping Comment	Response to Comment
Biomass	If this project involves biomass utilization, the impacts need to be clearly disclosed. How will the biomass be moved from the remote corners of the treatment areas to the landings? Will there be extra passes made by heavy equipment? Will the landings be enlarged to make room for grinders, chip vans, and other equipment? Can the local forest roads accommodate chip vans? Will the roads be modified to make them passable by chip vans? What are the impacts of that? What are the direct, indirect, and cumulative impacts on soil, water, wildlife, and weeds?	Biomass may be removed from the landings that are described with the logging systems. No additional landings or fuels reduction methods would be required to remove the biomass from the treatment units with commercial harvesting. In addition, biomass may be removed from the sapling thinning treatments units rather than leaving the material on-the-ground. No additional landings have been analyzed or would be required, but rather the roadsides would be used to gather the small diameter materials. The use of ground based equipment within these units was analyzed in Chapter 3. If any additional needs are required for the removal of biomass, additional environmental analysis would be completed as required by the National Environmental Policy Act.
Economics	The only comment AFRC has at this time is to ask that you be very cognizant of the economics of a project such as this. Given the land management allocations and the fact you are proposing management within a municipal watershed, it's predictable that there will be extensive measures taken to ensure little or no environmental impact. Please remember however that such measures have tradeoffs and typically that includes higher operational costs. We ask that you pay close attention to this as the project design and layout moves forward.	While economics were considered when developing the Proposed Action for The Dalles Watershed Phase II, it was not a primary driver to project design, as the Purpose and Need pertains to hazardous fuels reduction and not economic recovery. An economics analysis has been completed for this project (see Section 2.2.2).
	Only a small subset of needed restoration activities are "profitable," so we can't let logging economics determine restoration priorities. If we restore primarily those areas that have commercial sized logs and fail to treat the thousands of acres of areas that need restoration but lack economic return, we will not be accomplishing real restoration which requires carefully and strategically choosing the subset of the landscape that can be treated to provide the greatest gain (both ecological and fire hazard reduction) for the least ecological "cost" in terms of soil, water, wildlife, carbon, and weeds. "Hoping to boost their economies and also restore these forests, local leaders are interested in the economic value of timber that might be available from thinning treatments on these lands. … [W]e found that on lands where active forestry is allowable, thinning of most densely stocked stands would not be economically viable."	

Resource Area	Scoping Comment	Response to Comment
Noxious Weeds	Take proactive steps to avoid the spread of weeds. Avoid and minimize soil disturbance. Retain canopy cover and native ground cover to suppress weeds.	By following and implementing the Project Design Criteria/Mitigation Measures identified in the "Noxious Weed Risk Assessment," the Forest Service would be proactive in preventing the establishment or spread of noxious weeds.
	Commercial logging tends to present significant risks of weed infestations because of soil disturbance and canopy reduction	Different types of commercial logging can present potential opportunities and risks for noxious weeds establishment and/or spread. The fuels treatments proposed for this project along with the implementation of the Project Design Criteria/Mitigations identified in the "Noxious Weed Risk Assessment" are anticipated to reduce this risk and or eliminate it completely.
Roads	Is there a way to do some fuel reduction along these key roadsides even if they are outside the target watershed?	The Dalles Watershed Fuelbreak project is treating the perimeter roads within the watershed. The fuelbreak includes portions of 1700, 1700150, 1700151, 1700160, 1700161, 1700662, 1720, and 172019. In addition, three interior roads are included in the project: 1721, 1721013, 1720190, and 1720192. Treating additional roads within the watershed is outside the scope of this project, which is focused on treating the fuels within the interior of the watershed as discussed in Section 1.3, Purpose & Need for Action.
	Also, the scoping notice does not mention anything about roads. Are there any roads being built or re-aligned for this projects? Skid-roads? Landings?	Both existing and new temporary roads would be utilized in the implementation of this project. All temporary roads would be decommissioned and closed after use. Yarding Systems would determine the need for skid trails, corridors and landings. While both systems require the use of landings to process logs, ground based yarding systems would result in skid trails where skyline based yarding systems would result in corridors. Yarding features such as landings, corridors, and skid trails would encompass no more than 15% of a harvested unit in order to meet forest plan guidance. For more details, see Section 2.2.2, Proposed Action.
	No new roads, temporary or otherwise, to be constructed or reconstructed	No new National Forest System Roads are proposed in this project. Any temporary roads would be decommissioned and closed after use. Refer to Chapter 3 - Environmental Consequences, where impacts related to temporary road construction were analyzed.

Resource Area	Scoping Comment	Response to Comment
Soils	If using techniques such as whole tree yarding or yarding with tops attached to control fuels, the agency should top a portion of the trees and leave the greens in the forest in order to retain nutrients on site.	Organic matter standards are used as a way to compare the alternatives and are discussed in the Section 3.4, Soil Productivity and Section 2.2.3, Project Design Criteria/Mitigation Measures. It is likely that some localized acreage would be lower than Forest Plan standards for organic matter, which is an intention of the Proposed Action for a fuel reduction project. This is most likely to come about on south facing soils where treatments are proposed (soils 2, 5, 7 and 8). When this occurs, it is not expected to be a substantial impact to nutrient cycling due to the following: these are not clearcuts followed by intense burning and extreme loss of current and future organic matter; the shape and extent of some of the impact is narrow and discontinuous; and many of the soils impacted would retain sufficient organic matter reserves in the remaining standing trees and mineral topsoil due the way in which they have developed.
	Protect soils by avoiding road construction, minimizing ground-based logging, and avoiding numerous large burn piles. Rank new road segments according to their relative costs (e.g. length, slope position, soil type, ease of rehabilitation, weed risk, native vegetation impacts, etc.) and benefits (e.g. acres of restoration facilitated), then use that ranking to consider dropping the roads with the lowest ratio of benefits to costs. Once you have determined the relative acres accessed per mile of road construction, you can take the analysis one step further, to determine the "effective road density" of each segment? In other words, extrapolate as if that much road were required to reach each acre of the planning area, then compare the resulting road density to standards for big game, cumulative hydrological impact, etc? For example, if a new spur road accesses thinning opportunities at a rate of 200 acres of forest per mile of road, then divide 640 acres per section by 200 acres per mile to determine the effective road density of 3.2 mi/mi^2. Where road building is deemed necessary, ensure that the realized restoration benefits far outweigh the adverse impacts of the road, build the roads to the absolute minimum standard necessary to accomplish the job, and remove the road as soon as possible to avoid firewood theft, OHV trespass, and certainly before the next rainy season to avoid stormwater pollution. Do not allow log hauling during the wet season.	Comment noted and considered. Impacts to soil resources are analyzed in Section 3.4, Soil Productivity. In addition, there are Project Design Criteria/Mitigation Measures (Section 2.2.3) that address roads, logging systems, size of burn piles, and season of operation.

Resource Area	Scoping Comment	Response to Comment
Watershed Resources	Buffers for riparian areas (150 feet for perennial non-fish bearing and 300 feet for fish bearing streams), including wetlands and seeps	Riparian Reserves would be in place along perennial and non-perennial streams, lakes, springs, seeps, and wetlands with both entry treatment areas and non treatment areas along stream riparian reserves. See Section 2.2.2, Proposed Action for detailed proposed activities in riparian reserves.
	What are the actual risks associated with such a fire on water quality?	Impacts to water quality are analyzed in Section 3.5, Watershed Resources. This analysis includes a description of potential effects to water quality from catastrophic wildfire. The assessment is based on pertinent research and personal observations from over 18 years as a professional hydrologist involved with assessing risks of large wildfires on water quality.
	Watershed protection requires that thinning be focused on areas accessible from existing roads. Building new roads will cause watershed and degradation and habitat degradation that typically erases any alleged benefit of treatments.	Impacts to water quality are analyzed in Section 3.5, Watershed Resources. This analysis includes a description of potential effects to water quality from all activities associated with The Dalles Watershed Phase II Project. As stated in the analysis, no new permanent roads would be constructed for this project. Short temporary roads would need to be constructed to facilitate the project and the effects of these roads are analyzed in Chapter 3.
	Buffer streams from the effects of heavy equipment and loss of bank trees and trees that shade streams. Mitigate for the loss of LWD input by retaining extra snags and wood in riparian areas. Recognize that thinning captures mortality that is not necessarily compensated by future growth.	All streams would have a riparian reserve with both entry and non entry areas. This "No Touch" area is described in the riparian reserve prescriptions in Section 2.2.2, Proposed Action. The riparian reserve prescription takes into consideration soil disturbance from heavy equipment, stream side and floodplain vegetation, and the primary and secondary stream shade zones. The riparian reserve prescription also was designed to retain existing large woody debris (LWD) and supply future inputs of LWD to both the stream channel and flood prone areas (floodplain).
	Removal of commercial logs necessitates road related impacts on soil and water resources. Machine piling and pile burning tend to cause significant adverse impacts on soil and water, especially when combined with road impacts and other logging disturbances	Impacts to soil resources and water quality are analyzed in Section 3.4, Soil Productivity and Section 3.5, Watershed Resources. This analysis includes a description of potential direct, indirect and cumulative effects to these resources from all activities associated with The Dalles Watershed Phase II Project as well as other past, present and reasonably foreseeable future projects that may overlap the analysis area in space or time.

Resource Area	Scoping Comment	Response to Comment
Watershed Resources (continued)	I would like to see additional research into the fire ecology of the area. Is there evidence that the proposed logging/fuel reduction treatments would not harm water quality and ecosystem stability more than fire? What would be the severity of a fire in the area? Will watershed analysis be done prior to and following the proposed treatments? Will this information be made available to the public?	Impacts to water quality are analyzed in Section 3.5, Watershed Resources. This analysis includes a description of potential effects to water quality from catastrophic wildfire. The assessment is based on pertinent research and personal observations. Watershed Analysis was completed for this area in 2000 and would be updated as needed.
Wildlife	It looks to us as if violations of these standards will have heavy impacts on certain wildlife forms ranging from fungi to various woodpecker species. What research justifies these violations of the Mt. Hood Forest Plan?	The impacts of reduced snags and down wood are analyzed in the wildlife effects section. No significant impacts were identified as part of this analysis as described in Section 3.7, Wildlife Resources. See response to comments on Forest Plan Standards and Guidelines above for more information.
	The scoping notice stated that part of the project area will have the canopy thinned down to 40%, and also noted that it would be violating the Forest Plan's required 6 down logs per acre. It is unclear if either of these proposed exceptions would apply in the Pine Marten Habitat Area. Bark hopes not, and suggests that the Forest Service follow all applicable guidelines to protect pine marten habitat.	The prescriptions for treatments within American Marten Habitat Area (B5) are consistent with the Forest Plan Standards (B5 010, 020, and 021): "At least 160 acres of mature and/or old growth forest habitat would be maintained within the 320 acre Management Area. Thinning would occur within the stands less than 100 years of age and canopy closure would be at least 50 percent within thinning activity areas. The project would not meet Forest Plan Standards (B-037, 038, 039): at least 24 snags > 24" shall be maintained within the 160 acre Management Area (B-037); at least 6 logs per acre shall be maintained (B-038); logs shall be at least 20 inches in diameter at the small end and at least 20 feet in length (B-039)." For more details, see Section 3.7, Wildlife Resources.
	No entry into Late Successional Reserves	No treatments are proposed within Late Successional Reserves.
	Treated stands do not existing in isolation, so be sure to consider the effects of thinning on adjacent areas which may provide habitat for species of concern. Prepare a "risk map" based on proximity to different habitat types from high quality to non-habitat.	All projects that overall in time and space were analyzed for all wildlife species as part of the cumulative effects analysis. For more information see Section 3.7, Wildlife Resources. For a list of all project considered in cumulative effects, see Chapter 3.
	Recognize that thinning captures mortality and that most stands (especially plantations) are already lacking critical values from dead wood due to the unnatural stand history of logging, planting, and disrupted natural processes. To inform the decision, please conduct a stand simulation model showing that long term snag recruitment (after logging) will still meet DecAID 50-80% tolerance levels.	On average the proposed treatment units are below Forest Plan Standards and Guidelines for snags (FW-215). Currently, there are roughly 3.5 snags per acre 20 inches DBH (diameter at breast height) and greater. The Forest Vegetation Simulator (FVS) was used to model snag recruitment in the future. Thinning and burning, in the short term, would decrease the amount of small diameter (less than 15" DBH) snags densities. In the long term, with the proposed treatments, stands would provide greater number of green retention trees for snag recruitment in the future. Snag densities of

Resource Area	Scoping Comment	Response to Comment
		trees 20"
Wildlife (continued)		DBH and greater would increase in the future, and move the stand closer to Forest Plan Standards and Guidelines for snag densities. Refer to Appendix B of the Vegetation report in the project record for FVS runs. Also, refer to the Section 3.2, Vegetation Resources for more information.
	Retain abundant snags and course wood and green trees for future recruitment of snags and wood. Retention should be both distributed and in clumps so that thinning mimics natural disturbance. Retention of dead wood should generally be proportional to the intensity of the thinning, e.g., heavy thinning should leave behind more snags not less. Retain wildlife trees such as hollows, forked tops, broken tops, leaning trees, etc. Think not only about existing snags but more importantly about the processes the recruit snags, including: a large pool of green trees from which to recruit snags and the existence of competition and other mortality processes. Logging will significantly harm both of these snag recruitment factors. Recognize that thinning captures mortality. To inform the NEPA decision, please conduct a stand simulation model to fully disclose the adverse effects of logging on dead wood, especially long-term recruitment of large snags >20" dbh, and then mitigate for these adverse effects by identifying areas within treated stands and across the landscape that will remain permanently untreated so they can recruit adequate large snags and dead wood to meet DecAID 50-80% tolerance levels as soon as possible and over the long-term.	A DecAid analysis has been completed for this project as described in Section 3.7, Wildlife Resources. Snags and wildlife trees described are combined for the purpose of determining DecAID levels. Due to the low number of snags and trees with elements of wood decay in the project area, most units would have snag and defective tree densities and sizes below the 30% tolerance level pre and post treatment. The project would remove some snags and existing coarse woody debris. The area within the Surveyor's Ridge LSR would have 240 linear feet of down logs per acre and 2.25 snags per acre (Surveyor's Ridge LSR Plan, 100% biological potential) post treatment.
Funding	How will this project be funded? Is any of the funding for this project dependent on commercial logging in the project area?	Funding for these projects would be determined during the implementation phases of this project. Funding generated from commercial logging activities would generate retained receipts for the Forest to use in restoration projects. The appropriate restoration projects are defined in Forest Service Handbook 2409.19. At the time, the Forest does not plan to use any retained receipts to fund this project.
	What will ensure adequate funding for long-term management of Phase I and Phase II areas to ensure that fire resiliency is maintained?	

Resource Area	Scoping Comment	Response to Comment
Monitoring	Use projects as an opportunity to conduct monitoring and research on the effects of thinning. There are many information gaps that need filling. Every project should generate useful information to inform future projects.	The project would be monitored as part of the monitoring protocol established by the Mt. Hood Land and Resource Management Plan (Forest Plan).