BARK
PO Box 12065
Portland, OR 97212
www.bark-out.org
503-331-0374

May 18th, 2012

Dear Jennie O'Connor Card,

Thank you for the opportunity to comment on the proposed Red Hill Timber Sale. This project is located in the Upper West Fork Hood River watershed and is proposing to log approximately 1,700 acres and to decommission, stormproof, or close approximately 21 miles of road. The units of logging occur within C1 (Timber Emphasis) land allocation, with the majority (80%) in Matrix lands. The remaining land allocations within the project area include: A9 (Key Site Riparian); B10 (Deer and Elk Winter Range); B2 (Scenic Viewshed); and B5 (Pine Marten). The subwatershed, the Upper West Fork Hood River, is also a Tier 1 Key Watershed.

As you know, Bark has more than 20,000 supporters who use the public forests surrounding Mt. Hood, including the areas proposed for logging in this project, for a wide range of uses including, but not limited to: clean drinking water, hiking, nature study, non-timber forest product collection, spiritual renewal, and recreation. We submit these comments on their behalf.

I would like to start by saying thank you for listening to the recommendations of the collaborative group, and removing the worst portions of the proposed sale. We are pleased to see that there are no Huckleberry enhancement units high up on the Cathedral Ridge. There is no longer going to be logging in native stands for Pine Marten and Pileated Woodpeckers, and that Forest Health stands in native forests were reduced from 650 acres to 250 acres. These are all improvements to the project.

However, Bark still has concerns with the Red Hill Timber, specifically regarding the size of the sale, the amount of infrastructure associated with doing a large timber sale, loss of snags and downed woody debris, the assertion that commercial thinning is "restoration", and the present lack of a public demand for wood products.

The Red Hill logging project has brought up our ongoing concern about the Forest Service's assumption that the impacts of commercial thinning are benign enough for massive projects to be proposed annually, overlapping within watersheds and without a high level of scrutiny as to cumulative impacts. This seems particularly relevant because the watershed analysis that should provide the foundation for this project is severely outdated. More, and better, watershed level analysis is needed before more timber sales are planned with this broad scope. We would request that the District work towards creating a more updated watershed-wide analysis before proceeding with the project.

PUBLIC PARTICIPATION

Groundtruthing the sale has been hampered by the timing of the release of the scoping notice. The Red Hill proposal is entirely out of reach to the public at this time since it is below the snow line. As the scoping period is when the public is asked to participate in the NEPA process, the onus is on the Forest Service to ensure that this happens when access to the sale area is possible. We request the Forest Service only move on these proposals when the public can fully engage in the NEPA process. We also request that any site specific comments be considered outside of the official scoping period since the area is presently inaccessible.

In addition, Bark has repeatedly expressed concerns for the public's ability to have meaningful input for timber sales of this size and distance across the landscape. In the past five years, the Forest Service has continually increased the size of proposed projects to now span multiple watersheds and even Ranger Districts in some cases. As an agency that manages public lands and must include the public in all decisions that affect public resources, these sales need to be put forth in a way that includes full public participation. While the sale has been in the works for some time with the collaborative group, the exact direction of the Forest Service was only unveiled with the scoping notice, at a time when the public cannot access the sale area.

Another regular concern from Bark's volunteer groundtruthers is that the units are all unmarked. This makes it very difficult for people lacking such devices as GPS to meaningfully engage with a project that they can't be sure exactly where the unit starts and stops. We understand that the agency is not inclined to mark units until everything is said and done, but we feel that there needs to be a creative way to make this process more open to the general public.

Bark volunteer groundtruthers are planning on visiting the proposed sale area more in the summer (when access is not prevented by snow) and will provide more site specific comments to the Forest Service as we are able to attain them. For now, we must base our understanding on units visited during Collaborative Group field trips. Independent Bark visits to the timber sale were focused on the more contentious aspect of the project – again, thanks for their removal –so we have less site specific comments for the project as it presently stands.

FOREST HEALTH STANDS

The Forest Health stands included in this project are entirely unnecessary from a forest ecology standpoint. As the Scoping notice notes, these stands "had fuels reduction treatments within the past 80 years." It is unclear as to whether the management that occurred within these stands were commercial projects or not. I recall that in collaborative group discussions, there was talk that portions of the Forest Health stands were naturally regenerated. In fact the Scoping letter seemingly alludes to this by mentioning "The stand composition, structure, and densities in the Red Hill project area have been altered by fire suppression efforts over the past 100 years." By not addressing these stands as commercial projects or plantations, it seems to suggest that some of these stands were not commercially logged in the past. As 400 acres of Forest Health stands were removed from the project, might it be that these naturally regenerated stands were removed? I know that from some of my visits to Unit 44 as it stood pre-scoping, the area had no stumps within the unit. Could you please clarify this?

The Scoping letter goes on to justify logging in these Forest Health stands because "there is a high risk of stress related mortality, above normal insect and pathogen mortality." These endemic diseases are vital to the overall health of these stands. Decay elements are what creates snags and downed wood. Decay recycles nutrients promoting the long term health of the stands. When the agency initially approached the project there was mention that the agency needed to log to create snags for Pine Marten. Now, there is another stand in the same planning area that is starting to create suitable habitat in an area that is largely snag deficient. It doesn't make sense to thwart that natural process, when the watershed is in need of snags. While we recognize that there are certain pieces of the forest that are designated for Marten habitat, and others for timber management, the fact is that these critters don't read these documents and so as planners we need to work with what is there. And hands down, natural processes and their thousands of years of evolution are going to be more adept at creating high quality habitat than commercial logging.

If these stands are thinned, there will be a reduction in number, and a delay in the recruitment of snags, first by removing trees that would otherwise suffer suppression mortality, and second by increasing stand vigor and postponing overall mortality. These stands will continue to be snag deficient until the canopy again closes and competition commences again. In essence, the thinning will "capture" the mortality normally found in a forest and remove it from the site. These unnaturally healthy stands will further aggravate the dearth of snags and CWD, bringing these areas well outside the range of natural variability, and keep the watershed below the recommended rate. As mentioned in the Watershed analysis the stands should have "An average total of at least 6 logs per acre in decomposition classes 1, 2 and 3." Instead of letting natural processes help the Forest Service achieve these watershed wide objectives, it is instead choosing to exempt itself from the standards that were set in place to maintain healthy forests and viable populations of snag dependent species. By not thinning these stands with disease processes we could better move the forest in alignment with these criteria.

Inversely, when field visits were conducted by members of the public, there was no clear sign that disease was prevalent in the area. I recall from a collaborative meeting that Bruce Holmgren had mentioned visiting Unit 50 and not seeing any major signs of disease, and I had similar experiences in Unit 44. Mostly what I saw was healthy looking stands of trees with a decent spacing. If anything, what these stands needed were some suppression mortality to create snags which would occur if left alone.

Not to mention, if we are truly trying to log to prevent diseases, the Environmental Assessment needs to recognize that certain recyclers like Brown Cubicle Butt Rot (*Polyporus schweinitzii)* are encouraged to reproduce as machinery drives over infected roots and then disposes them on otherwise healthy trees. According to the National Forest Health Protection analysis "This disease can affect all pines and is most prevalent in trees that have suffered basal wounds from fire, logging, soil compaction, or root injury." In other words, mechanical damage from driving heavy machinery over their roots. This is inevitable when skid trails are generally placed 250 feet apart. The

report than goes on to note “In forest stands, no method of controlling the disease is known. Losses may be reduced by minimizing stand entries.”

The scoping letter in particular calls out the balsam wooly adelgid as a pest of concern. Yet throughout the analysis, the emphasis is that the stands are not diverse and contain too many Doug Firs. But the balsam wooly adelgid is a pest on true Firs (Abies spp.) and not on Douglas fir. If the intent is to prevent wooly adelgids through logging, wouldn’t the Forest Service just be cutting more Abies spp. and thus further simplifying the stands? (R. Ragenovich. 2006).

There are other characteristics of these two units that suggest that they should not be logged. In unit 50, while the trees are in the described age range of 60 to 80 years of age there are 6 streams that cross the unit on these very steep slopes (25% to 35%), above the West Fork Hood River. I recall the interim District Ranger in Diana Bambe’s absence mentioned that unit 50 showed signs of avalanche chutes within the unit and along these riparian areas. If one of these gets activated by logging, this could add a lot of sediment into the West Fork. According to the Watershed analysis, the West Fork is a Tier 1 watershed that has semi common rain-on-snow events and mass wasting. (WFHRWA 4-8). This should not be contributed to.

In Unit 44, with gentler slopes and less water crossing the unit, there are trees in the stand that seem to be older than the age range of 80 years. Again, there were no signs of major disease outbreaks noted in the unit during our field visit. These stands were nicely spaced trees with ample well spaced gaps, and understory vegetation starting to move back into the stands. It seems incongruous that logging this forest would enhance forest health, and is actually much more likely to decrease overall ecosystem health and inhibit natural processes.

In conclusion, Bark requests that the Forest Health stands be removed from further consideration in the Red Hill Proposal. Bark suggests that the Forest Service allow natural processes to prevail and create much need habitat in the planning area. Especially in any native stands that have not been previously commercially logged.

PLANTATION THINNING

The science and implementation of restoration treatments in young-managed forest landscapes is in its infancy. As recognized by the Pacific Northwest Forest Restoration Learning Network, while retrospective studies and models suggest active restoration is warranted, there are few long-term studies which help managers clearly identify "best management practices" for thinning projects. (Davis, 2008). In fact, a common debate is whether forests should be actively restored (e.g., thinned) and how management of road systems interact with thinning to affect ecosystem recovery at watershed and landscape scales. Moreover, as forest managers begin to implement active restoration in degraded forest landscapes; specific prescriptions for treatments have been extremely diverse. With limited practical experience, managers often are struggling to interpret the scientific literature and develop treatments that are operationally sound. (Davis, 2008).

Such is the case with the Red Hill Timber Sale. Bark and the Forest Service can agree that the Upper West Fork Hood River Watershed is an area significantly degraded from decades of poor management. As discussed in the Watershed Analysis, "introduced plants are successfully competing against native plants" (WFHRWA 3-1) and "current information may not be adequate to ensure the viability of some species" (WFHRWA 3-3). The Watershed Analysis notes that: "The absence of fire, cutting in the early 1900s, and even-aged stand regeneration practices in the past 60-80 years have all contributed to Douglas-fir dominated, dense, and often single-story stand conditions."

However, Bark diverges from the Forest Service concerning the best path to forest recovery. As noted above, there is yet to be scientific consensus about how, or whether, forests should be actively managed to achieve restoration objectives. With the Red Hill Timber Sale, the Forest Service heartily embraces active management, with the twin goals of growing bigger trees faster and meeting timber volume targets.

While there may be some benefits to active management, Bark believes that the environmental tradeoffs far outweigh the conjectured benefits. For one the thinning science is premised on the assumption that thinning grows bigger trees faster and that this outweighs the ecological impacts of increasing soil compaction, sedimentation, and peak flows while decreasing wildlife habitat, down woody debris and snags. This assumption is neither fully supported in scientific literature, nor applies equally to every stand of trees in the Red Hill project area.

As noted above, the concept of active thinning to restore forests is fairly new, and yet unproven. One important body of research on restoring young forests has come from the Pacific Northwest Coastal Forest Restoration Learning Network. The Learning Network was created in an effort to facilitate communication between managers and scientists, and catalyze growth in practical restoration knowledge. The learning network includes members from restoration projects within young-managed forest landscapes throughout the Pacific Northwest Coast (SE Alaska, British Columbia, Washington, Oregon, and northern California) and parts of the West Cascades, North Cascades, and Pacific Ranges.

Far from making the sweeping claims that the Forest Service presents in the putting forth these projects as restoration, the Learning Network has identified several remaining questions about the impacts of thinning. (Davis, 2008). Of particular interest to the Red Hill sale are the following questions identified by the Learning Network, followed by suggestions for further research:

How will stands develop if they are left unthinned?
We are not certain how stands will develop if they are left unthinned. Because so much of the landscape remains in a younger condition (under 80 years), we still have little empirical data on the development of unthinned stands. Often, the decision to thin a stand or not thin a stand is a decision based on operational logistics, economics, and expectations of improving ecological conditions of the system.

How do treatments interact with the natural processes of the forest system?
It is not clear how restoration treatments may interact with or change disturbance regimes or alter hydrologic regimes. For example, it is possible that thinned trees may become wind-firm and reduce the amount of windthrow patches in the future stand.

Alternatively, thinning could encourage increases in forest pathogens (e.g., Annossus root rot in western hemlock) that may prevent the stand from reaching a late-seral state. In addition, thinning can alter wildlife behavior (e.g., increase bear damage, alter ungulate browse). These may have unanticipated impacts on stand development and should be considered from the outset.

If a young stand is treated, what type of treatment should be used?
Knowledge on the impacts of variable density thinning and the inclusion of skips and gaps, including size and spatial arrangement, is still unknown. Results from most studies that have investigated these are still in early stages of development, so long term trends remain clouded. The tradeoffs of one entry versus multiple entries are also unclear. Many believe that multiple entries may be necessary to achieve late successional habitat, especially where western hemlock is prevalent. However, the repeated disturbance from tree felling and harvesting equipment on other elements of stand structure and composition are not known. (Davis, 2008).

Bark echoes these uncertainties about thinning and requests that the Forest Service engage with this scientific uncertainty rather than making unsupported, sweeping conclusions about the unequivocal benefits of thinning. In addition, other research on thinning urges forest managers to approach such projects cautiously, acknowledging their uncertainty and ecological tradeoffs. A team of six scientists recently considered large scale thinning and identified many concerns about the practice. They found that even when confined to previously harvested stands, thinning treatments must be evaluated carefully and implemented in such a way as to avoid negative impacts. (Carroll, 2009). Ground based methods and associated machine piling, burning of activity fuels, construction and increased use of roads and landings can increase soil erosion, compact soils, and elevate surface runoff. (Carroll, 2009).

They concluded that no evidence exists to support the contention that an extensive thinning program will hasten restoration of historic patterns of forest heterogeneity on a landscape scale. Hence, thinning treatments should be applied cautiously and only where ecologically warranted. Thinning should not be considered a cure-all for forests degraded by fire exclusion or other human activities. (Carroll, 2009). As discussed below, Bark requests that the Forest Service engage with these questions and cautions and develop more reasoned and scientifically supported restoration-based alternative for inclusion in the Environmental Assessment.

Another factor with thinning relates to the natural progression that forests take, and the unknowns about what is lost through thinning. For example, when forests naturally transition from stem exclusion phases to understory reinitiation, which is exactly where these plantation stands are, herbaceous plants start to move into the understory and will continue to become more prominent in the stand as the gaps are created through natural selection. Logging disrupts this transition by allowing a sudden increase in the amount of light allowed onto the forest floor as well as serious impacts to the soil health. What we do not know at this point of time is whether those communities will return, and to what extent?

Bark recently has explored some commercial thinning “restoration” timber sales, a year or two post logging. To say that the forest looked intensely degraded is an understatement. The microclimate changes, the dry exposed soil, the complete lack of

any understory canopy layer or ground cover (aside from the invasive thistles in the skid trails) was stark and shocking. While this may be a short-term impact – the mid to long term impacts of thinning are simply not known. We then contrasted this to a recently burned area, with a thriving understory with native plants making up the constituency of the understory. The fact is that no matter how good the Forest Service's intentions, we cannot mirror natural cycles. And that we do not under at this point the full extent to which we are disrupting natural processes, and should not be planning watershed-wide sales that lead to an unknown ecological outcome..

DISEASES AND SNAGS

One of the greatest ironies of this proposal, especially in relation to the Forest Health stands, is the stated purpose of logging to reduce endemic diseases which are the starting points in the creation of snags. Meanwhile in the Watershed Analysis we includes information that: "Timber harvest in National Forest Lands left inadequate numbers of snags" to maintain healthy populations of wildlife (WFHRWA pg 4). If the Forest Service continues to disallow the decay processes that create snags and downed woody debris, the forests will never get back to healthy levels of habitat.

As mentioned above, "released" trees left after the thinning will not have to compete as strongly for the elements they need to grow (i.e., water, sunlight, nutrients). These trees may be healthier than those typically found in naturally regenerating stands, allowing them to resist those factors that would lead to the creation of snags and downed wood. In essence, logging would "capture the mortality" until the canopy closes again. These unnaturally healthy stands will further aggravate the dearth of snags and downed wood and bring these areas well outside the range of natural variability. These stands current lack of structural diversity is being addressed too exclusively by the vertical green tree structure. This approach is laying the groundwork for decades of impaired forest ecosystem functions and processes.

The captured mortality and intentional avoidance of decadence management will have specific and negative consequence across a broad range of forest ecosystem characteristics. For example, the simplification of forest structure due to the lack of these elements will lead to stands missing microclimate diversity and microclimate maintenance; a simplification of habitat diversity; a loss of mycorrhizal fungal connections, which means corresponding losses to vegetation productivity and nitrogen fixing (already diminished due to the industrial forest conversion which skipped the nitrogen fixing roles of pioneer trees and shrubs). None of these issues are trivial and all are fundamentally important to proper functioning ecosystem processes and functions. It is disheartening to see the scoping notice exempt the project from this reality, by logging to prevent disease instead of inviting this much needed creation of habitat and continued soil health.

Further, these snags and downed woody debris are associated with the presence of approximately one quarter to one third of vertebrate wildlife in Northwest forests. At least 47 species deemed sensitive or special-status species have associations with dead wood. (Hagar 2007). At least 20% of birds in the western Oregon Doug-fir forests depend on snags for feeding or nesting (Cline et al. 1980). Pileated woodpeckers play a crucial keystone species role in Oregon's forests, and are directly affected by snag habitat availability. Over two dozen bird species have been shown to use cavities that have been previously excavated by Pileated woodpeckers. Species which subsequently

use pileated-created cavities to nest or roost include the flammulated owl, the bufflehead, and Vaux's swifts, which are on sensitive species lists or are considered priority species in Oregon or Washington. In the West Fork it is noted that species like Red Tree Voles, Certain Bats, white-headed woodpeckers, and great gray owls may not have enough suitable habitat, i.e., snags. (WFHRWA pg 3). Other vertebrate species include the northern flying squirrel, which is the primary prey of the northern spotted owl, as well as the common merganser, silver haired bat, and fisher, and American marten. (Aubrey and Raley 2002).

The Northwest Forest Plan's standards and guidelines (S&Gs) for maintaining viable populations of pileated woodpeckers emphasize monitoring. This includes: "implementation monitoring to determine if S&Gs are being followed, effectiveness monitoring to determine if they are achieving desired results, and validation monitoring to determine if underlying assumptions are sound" (Aubrey and Raley 2002). Monitoring of 106 randomly selected harvest sites on Forest Service managed land in Oregon since 1996 found that compliance with the snag S&G guidelines was lower than compliance with the guidelines overall, due to a widespread lack of clarity among staff concerning definitions, what snag levels are required to support 40% of the population potential of cavity nesting birds, and the guidelines themselves. (Aubrey and Raley 2002).

Monitoring of these guidelines by the Forest Service was inadequate to ensure that pileated woodpeckers and the species that depend on them, such as the spotted owl, were adequately protected in thinning projects. While snag retention strategies are now guided by the DecAid model, it is still unclear how clearly snag retention procedures are communicated to staff, or marking crews and loggers, or how accurately or consistently they are being implemented. Evidence suggests that thinning lowers snag density relative to un-harvested stands. (Windom and Bate 2008). In fact, same study, stands which were thinned retained snag densities approximately three times lower than in stands with no history of logging. Since large snags are required for the habitat requirements of many species, but are in short supply due to past and present management the Forest Service should exclude any stands with suitable snag habitat.

Bark requests that stands within the Red Hill project containing high densities of snags and legacy features be specifically excluded from logging. This would be particularly so with the Forest Health stands. No-cut buffers should be clearly defined and large enough to guarantee the retention of key snags so as to avoid situations in which they are felled due to safety regulations. In addition, "key" snags should be clearly defined and identified so that adequate communication with contractors can be maintained in regards to retaining these features, and monitoring efforts can accurately ascertain retention rates.

Bark is currently engaged in snag-retention monitoring work in relation to the Wildcat timber sale. While several positive interactions and discoveries have come out of this work, it also has raised questions about the Forest Service's ability to adequately implement and monitor snag retention strategies. For example, during our recent monitoring work in the Wildcat timber sale, none of the Forest Service staff we met with were able to guarantee that any snag would be retained, regardless of size, decay class, or habitat importance. Forest Service staff were unable to give a single

example of a snag that was clearly defined as a "key" snag during our multiple meetings within the Wildcat sale, even though the FS Wildcat CE letter stated that "[t]o increase the likelihood that snags would be retained, green trees will be marked as leave trees where their live crowns touch certain key snags" (FS 2005). Bark found at least two instances in unit 6 of the Wildcat sale in which legacy snags had adjacent small diameter (less than 4") "take" trees whose crowns were touching the snags, putting the snags at risk of being knocked down during harvest or taken down due to safety regulations. In addition, it was unclear if skips and gaps had been created within the timber sale, as was outline by the FS planning documents, and no one we talked to at the FS was able to tell us whether or not variable density thinning had been implemented as was intended.

While we were very pleased that the FS was willing and able to address some of our concerns within the 80 acre Wildcat sale, it seems likely that with an area as large as the Red Hill timber sale, many more such oversights in relation to special habitat protection and snags will go unnoticed and unprotected. For example, in unit 6 of Wildcat the Forest Service addressed our concerns about an area containing numerous legacy snags surrounded by "take" trees. Forest Service staff contacted the purchaser and arranged to leave most of the previously marked take trees which were interspersed in this legacy snag cluster, and replace them with other volume throughout the sale.

While the Forest Service staff and the purchaser were cooperative and amicable to these suggestions, this area should have been buffered by the Forest Service during the planning process. If oversights like this exist in such a comparatively small sale such as Wildcat, what does that say about a much larger sale such as Red Hill? We believe it would help if buffering legacy snags, and particularly clusters of snags and legacy snags, was a standard guideline, rather than an exception. With such biologically rare but crucially necessary habitats as these very large legacy snags of varying decay classes, guidelines and buffers that guarantee their retention should be required.

What we continually see in PAs is that it is acceptable to capture mortality because the trees will grow faster quicker with thinning – leading to larger snags in the future. This does not account for the time lag needed for the growth, death and decay necessary for these new snags to serve as functioning habitat for cavity nesters. There is a time lag between the creation of snags and their utility as habitat. A study on the use of created snags found trees killed within the last 10 years had little decay and had neither ant colonies nor adequate nesting or roosting cavities. (Boleyn, et. al., 2002).

Again, the Scoping letter acknowledges that proceeding with the project requires an exemption from the Forest Plan's standards regarding snags and downed wood. It mentions the agency will exempt the following standards "Where new timber harvest units occur (e.g., regeneration harvest and commercial thinning), wildlife trees (i.e., snags and green reserve trees) should be maintained in sufficient quantity and quality to support over time at least 60 percent of the maximum biological potential of primary cavity nesting species, e.g., woodpeckers." Snags and Down Log Associated Species (FW-215): and "An average total of at least 6 logs per acre in decomposition

classes 1, 2 and 3 should be retained in all project activity areas." Snags and Down Log Associated Species (FW-219).

Time and again, we see these habitat standards disregarded, generally because of some perceived future benefit, like bigger snags in the future. This is disheartening as many of the species that are in trouble *today* are so because they don't have available habitat *right now*. By reducing the density in these stands, there will be another 40 to 50 years before the canopy closes and we start to see the competition recommence and start to create the much needed snags that these stands are trying to create today. And as mentioned above there are so many species dependent on snags and downed wood that we need to start reprioritizing how we manage our forests. There is presently little need for wood on the national market (as demonstrated by the large number of sold but uncut timber sales piling up in the Mt. Hood National Forest), but major needs for habitat and healthy forests.

ROADS

While Bark is please to see that the Forest Service is proposing to close 12 miles of road through this project, we have concerns that the scoping letter mentions "roads would be decommissioned as funding becomes available." (emphasis added). In times of massive budget constraints this does not present any levels of certainty. As this is billed as a stewardship project, shouldn't road decommissioning be a definite thing? Again, because this is a stewardship project, doesn't the district get to retain money on the forest to do this vital work of road decommissioning? If this is not the priority, what other restoration work would these funds be directed towards?

It is also well known that the Forest Service does not have the funds it needs to keep roads open and maintained in sustainable way. It would be great to see a cost-benefit analysis of these roads being reopened and then reclosed after usage. We would encourage the District to provide this sort of analysis in the pending PA.

In similar sized projects in the Clackamas District, Bark has seen that these road decommissioning projects are often occurring on roads that are essentially already passively closed. Those roads have not been used for so long that the roads have naturally decommissioned themselves. As Bark is able to groundtruth the area we will be looking at the state of the roads, but also encourage the Forest Service to fieldcheck the roads, and not rely on your out of date road system data.

Roads are well known to be the biggest source of sediment to streams in particular, and water quality in general. When we continue to create larger and larger projects on the landscape the projects require move and more roads which has serious effects on the watershed as a whole. Again while we appreciate the removal of unnecessary roads from the landscape, we are concerned that passively decommissioned roads will be reopened to facilitate logging. And roads that are cited as being closed are essentially just held in storage and then reopened whenever the agency wants to get back into these areas. Again we would encourage an honest look at the picture of roads on the ground today, as well as a serious look at the long-term need for these closed roads.

Finally, if the road decommissioning included in this project is contingent of "available funds" and not guaranteed, the Forest Service should not use it to offset the environmental impacts of the logging project and its associated infrastructure, such as skid roads, yarding corridors, landings, haul routes, etc. Al these have known impacts to soil and water quality, which should be thoroughly analyzed and disclosed in the EA.

RECREATION

Roads such as 1650 access Red Hill units as well as the Vista Ridge trail. How will the Forest Service ensure that the trail is open to recreation users during logging? How will the Forest Service ensure funding to keep this roadway funded adequately to ensure that recreation users will still be able to utilize the trail?

I recall discussion of potentially using the trail head as a log landing. Landings are essentially small clearcuts that heavily compact and degrade the soil. Is this still on the table with the modifications of the project? How would this impact the recreational values of the area? And how would the agency find alternative routes for recreation users if Road 1650 is used?

LANDSLIDE RISK

Unit 50 has 6 small streams that cross the unit. When looking at some photos of the area there were signs of avalanche chutes along the fairly steep hill slope. As mentioned above, unit 50 showed signs of avalanche chutes within the unit and along the West Fork. If one of these gets going this could add a lot of sediment into the River. Again, the Watershed analysis notes that the West Fork has semi common rain-on-snow events and mass wasting. (WFHRWA 4-8).

RANGE OF ALTERNATIVES

Comparing a range of alternatives was once considered the heart of a NEPA document. Now, however, we see the Forest Service releasing project after project with no real alternatives analysis- just an action and no-action alternative. This neither meets the intent of letter of the law. Bark encourages the Forest Service to fully analyze a restoration-based alternative that does not include any "forest health" units in native stands, does not exempt itself from Forest Plan standards regarding snag and CWD density, and guarantees road decommissioning. Bark believes that this alternative would still meet the Forest Service's purpose and need, and should be fully analyzed in the EA.

CUMULATIVE EFFECTS

Several projects in the Wet Fork Hood River watersheds have cumulative impacts, which are defined as "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. When these impacts are significant, an EIS is required. Id. § 1502.4. Under NEPA, "significance exists if it is reasonable to anticipate cumulatively significant impacts on the

environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts." 40 C.F.R. § 1508.27(b)(7).

NEPA also makes clear that "cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement." 40 C.F.R. § 1508.24(a)(2).

Many units of the Red Hill timber sale are directly adjacent to units of previously thinned sales – thus increasing the impact of the sale. There is also active logging occurring in the Lake Branch project, impacts of which all ultimately end up in the same river. As Bark has witnessed, all over the forest many logging contractors have been sitting on contracts waiting for the price of wood to rise. We are concerned that should the price of wood rise again that we could potentially see unanticipated amounts of logging in a single season. Is there anything that the district can look at, or put in place to ensure that we do not have multiple projects being logged in a single season?

VARIABLE DENSITY THINNING

While we appreciate the move to make logging more closely mirror natural disturbances we are concerned as to whether this is achievable. As mentioned previously, the logging projects we see in the Clackamas look very different than the natural disturbances that fire creates. While VDT might provide options protect key snags, when we see these projects post-logging they look nothing like a natural disturbance moved through. In fact some sales in the Clackamas that were thinned 10 years ago are still not developing a new native understory. Mushrooms, such as chanterelles, are not coming back into the area. And as this is a new approach to logging, we do not know if they will return at some future time.

When Bark staff and volunteers are out exploring these units and find plants that are zooparasites, plants that have given up on photosynthesizing for themselves and instead rely on a rich subterranean community of tree roots, mychorrhizal fungi, and likely numerous other bacteria and other soil life, it is hard not to wonder if commercial thins will extirpate these species from the stand. Not only that, but the lack of these species likely represents a destruction in the soil community via compaction and sediment loss that we honestly don't know will ever come back.

Another issue with the approach of VDT is that with stewardship projects it is the logging company that makes the determination as to what trees would be marked to be cut. Stewardship projects generally move forward in a logging system known as Designation by Description, meaning than general guidelines as to what the stand objects are are given and then a private interest marks the trees. If a private company is doing the work, a company whose objective it is to make money, it is hard to imagine that they will carry forth the marking of trees in a way that is the most ecologically sound, but rather in a manner that is economically in their best interest. This very process would nullify any good ecological impacts the approach may foster. Further, how is the public to be assured that a private company will have the

ecological expertise to notice where a unique microclimate is that should be a skip or where a pocket of disease should be allowed to prosper and produce habitat?

Lastly, we'd like to mention that with skips and gaps we are seeing things like including riparian buffers within skips. This is cheap since these areas are off limits anyways. This creates less skip habitat within the actual unit that is open to log, and gives the agency less opportunities to use these skips in areas to protect snags and microclimatic features.

As this sale is almost certainly going to be implemented through a Stewardship Contract, with a Designation by Prescription, it is imperative that the Forest Service create specific monitoring points to ensure that the private company tasked to complete the project thoroughly understands variable density thinning, and complies with every single BMP, throughout the marking, logging, hauling and completing of the project.

IN CONCLUSION

Bark wants to say thanks again for the changes to this project reflecting the recommendations of the Collaborative Group. We are pleased to see the parts of the project with most adverse ecological impact are removed. We still have concerns with many aspects of the sale as outlines above. We are excited to see the detailed analysis of the Red Hill Project as they are developed, and we will keep the agency in the know of our groundtruthing efforts as we are able to get into the area.

Thank you,

/s/ Gradey Proctor

Gradey Proctor
Forest Watch Coordinator

Bibliography

Amaranthus, MP, Page-Dumroese D, Harvey A, Cazares E, Bednar LF. 1996. Soil Compaction and Organic Matter Affect Conifer Seedling Nonmycorrhizal and Ectomycorrhizal Root Tip Abundance and Diversity. US Department of Agriculture Forest Service. Pacific Northwest Research Station, Portland, Oregon. Research Paper PNW-RP-494.

Aubrey, K. and Raley, C. 2002. The Pileated Woodpecker as a Keystone Habitat Modifier in the Pacific Northwest. USDA General Technical Report PSW-GTR-181.

Beschta, R.L., Rhodes, J.J., Kauffman, J.B., Gresswell, R.E, Minshall, G.W., Karr, J.R, Perry, D.A., Hauer, F.R., and Frissell, C.A., 2004. Postfire Management on Forested Public Lands of the Western USA. Cons. Bio., 18: 957-967.

Boleyn, P., Wold, E., and Byford, K., Created Snag Monitoring on the

Boleyn, P., Wold, E., and Byford, K., Created Snag Monitoring on the Willamette National Forest, USDA Forest Service Gen. Tech. Rep. PSW-GTR-181. 2002

Carroll, C., Odion, D., Frissell, C, Dellasala, D. Noon, B., & Noss, R., 2009. Conservation Implications of Coarse Scale versus Fine Scale Management of Forest Ecosystems: Are Reserves Still Relevant? Klamath Center for Conservation Research, Orleans, CA.

Davis, L. Restoration of Young Forests with an Emphasis on Pre-Commercial Thinning. Pacific Northwest Forest Restoration Cooperative – Technical Paper No. 1, August, 2008

Forest Service Decayed Wood Advisory. Accessed online 12/15/11 at: http://www.fs.fed.us/r6/nr/wildlife/decaid/pages/Caveats-and-Cautions.html

Forest Health Protection. Accessed online at: http://www.fs.fed.us/r8/foresthealth/idotis/diseases/brncubrot.html

Forest Service. 1996. West Fork Hood River Watershed Analysis (WFHRWA).

Hagar, J. 2007. Assessment and Management of Dead Wood Habitat. USGS.

R. Ragenovich. 2006. Forest Insect & Disease Leaflet 118 Revised May 2006 U.S. Department of Agriculture • Forest Service **Balsam Woolly Adelgid**