Medford District Office
Bureau of Land Management

RE: Pilot Thompson Scoping Comments:

May 7, 2012

I would like to begin by stating that the process, analysis, and proposal of the Pilot Thompson Project has been expedited in a way that negates and discourages adaptive management. The prescriptions, contracts, objectives, etc. proposed as the Pilot Thompson Project should be based on the needs of the forest, historical data, wildlife concerns, monitoring data being created through the Pilot Joe Project and the actual on the ground outcomes of project implementation in Pilot Joe. I am concerned that by pushing the Pilot Thompson Project so quickly no opportunity to learn, adapt, or identify issues from these monitoring efforts will be incorporated into the Pilot Thompson analysis or prescriptions. It seems the collaborative/community is investing in the monitoring process for Pilot Joe, but results will not be available before implementing the next round of timber sales or service contracts. Thus large acreages will be treated under the pilot before we have evaluated for the effectiveness of treatments, prescriptions, or implementation. If issues develop based on monitoring results it will be too late to adapt and adjust our strategy or prescription. I find this to be troubling and irresponsible, especially given the experimental nature of the pilot projects. It seems that the term "pilot" would denote a test or trial of Norm and Jerry's restoration principals, yet implementation is preceding any effort to evaluate, analyze, or adapt to lessons learned in the Pilot Joe project.

The agency has stated that the Pilot Thompson Planning Area is embedded within the 50,000 acre Middle Applegate Pilot Area thus monitoring data from Pilot Joe (essentially, Phase 1 of the Middle Applegate Pilot) is unnecessary to proceed with implementation of further projects (i.e. Pilot Thompson), as they are all part of one large project authorized by the Secretary of Interior. I would like to note that many in the collaborative/ community are skeptical of the quality and effectiveness of project implementation by agency contractors, the level at which prescription guidelines will be followed, the ability of prescriptions to achieve multiple sometimes conflicting objectives, and the ability of industrial contractors to retain, enhance, and protect large snags, hardwoods, unique plant communities, wildlife sites, and the integrity of “skips” as proposed and outlined in the Pilot Joe units, these issues should be monitored, evaluated, and adjusted if need be, before we proceed. 50,000 acres is simply to large an area to "test" the current philosophy before seeing any solid results. We should be striving to treat this land well, not to simply “treat” land. We should be adapting, evolving, and innovating not stagnating in the current status quo of preconceived notions and untested scientific theory. We should be learning from past treatments so that we may move forward in a more holistic way. Thus I would suggest slowing down a bit and allowing the process to define areas in which we could improve, before thinning such large portions of Thompson Creek. Utilize the experience gained through the implementation of Pilot Joe, then proceed. Untested, unquestioned actions could lead to landscape scale problems or mistakes. We must work to create regionally specific treatments by adapting and changing as we proceed. We must refine our approach based on actual results and on the ground outcomes, rather than simply conjecture and preconceived objectives or goals.

Monitoring:

Given the experimental nature of the pilots, the vast size of planning areas and unit acreages, the presence of ESA species within the planning area, and the potential for the pilot projects to be used as models for future forest management in SW Oregon and the West, monitoring should be emphasized to the highest degree possible. This would include utilizing the data produced in an adaptive management framework, compiling long and short term data sets, and creating holistic monitoring protocol that address the many issues at risk.

Funding for comprehensive monitoring should be secured before the Pilot Thompson EA is released and before the agency proposes more pilot treatments. A main objective of the pilot is to demonstrate or test the treatments outlined by Norm and Jerry, this can only be done by creating sound and holistic monitoring data that will show results or impacts. Only through this approach can the science be objectively analyzed and implementation evaluated.

Monitoring data should be collected to monitor project implementation including the implementation of skips and gaps, the retention of large hardwoods and snags, the variability of treatments, and the impact to soils by yarding. Data should also be collected to monitor the response of Northern Spotted Owl and the Pacific Fisher to treatments, the changes in plant composition, forest fuels, and forest structure. Units should be monitored for noxious weed introduction or spread. Other monitoring objectives could include the level of heterogeneity created, the response by targeted tree species, and the response of woody shrubs in the understory. Soil compaction, disturbance, and loss should also be monitored within yarding corridors to evaluate impacts and outcomes. Lastly the agency should monitor and evaluate the effectiveness of age estimations in treated stand much as Norm and Jerry outline on page 77 of their report titled “Restoration of Federal Forests in the Pacific Northwest: Strategies and Management Implications”. They recommend tree ring monitoring following treatment and a 5 year review of age protocol by a qualified team of experts.

In Norm and Jerry’s recent report titled “ SW Oregon Secretarial Pilot Projects on BLM Lands: Experianc e so far and broader considerations” they recommend 4 party monitoring and note that “interest in monitoring and adaptive management was high (p.17), yet monitoring has been under funded, de-emphasized, and adaptive management stifled. Why? Both the collaborative and the professors have clearly spoken and the agency response thus far has been clearly lacking in this regard.

Yarding:

Traditional, linear yarding methods cannot create the highly heterogeneous and variable landscape proposed in the pilot project guidelines and principals. This has been demonstrated in the Pilot Joe project where long, linear yarding corridors dominate the forest mosaic as seen from Highway 238. These corridors have been subjected to severe erosion, compaction, and disturbance, undoubtedly causing damage to soils and encouraging future noxious weed infestations. Upper Thompson creek was identified in the MA-WA as an area of concern in regards to soil compaction from past logging operations. In areas suffering from past impacts minimal impact approaches may be necessary. Likewise,

to implement the approach outlined by Norm and Jerry more innovate, minimal impact approaches should be considered, analyzed, and tested.

An approach implementing skips and gaps makes traditional yarding methods difficult. Forest restoration or forest health goals should not compromised by commercial timber extraction objectives. More emphasis regarding innovative and low impact yarding should be explored in the Pilot Thompson Project. Intermediate supports, full suspension cable yarding, small diameter yarding equipment, and the minimizing of tractor yarding should be explored. No heavy equipment should be allowed within riparian reserves. Road development and the creation of new landings should be kept to a minimum if not entirely eliminated.

Yarding corridors as implemented in the Pilot Joe project tend to limit the natural mosaic, the variability or heterogeneity of the forest landscape, compromise "skips", and impact the viewshed/ natural visual appearance of the landscape. The agency should monitor for soil impacts, viewshed impacts, the integrity of "skips", impacts to residual trees, erosion rates, and the spread of noxious weeds in yarding corridors.

Fuels:

Regarding fuels I have two main concerns. First, that activity fuels generated by both commercial and service contracts be burned or otherwise treated. This has not been done in the Pilot Joe project and funding has not been secured/identified for slash removal. This is clearly of concern as one of the main objectives of treatments is to reduce fuels and reduce the risk of high severity fire. Fine fuels such as logging slash and limbs must be treated as part of commercial and non-commercial treatments without exception. Funding must be identified for slash removal prior to implementation of the Pilot Thompson Project. It has been stated many, many times by the collaborative that activity slash is a major concern and it should be treated promptly. We have been told this would be the case. Why at this point has the agency failed to deliver on this guarantee?

Second, I have concerns regarding shrub response in the understory of treated stands. Apparently Norm and Jerry have this same concern and have stated clearly so in their report titled "Restoration of Federal Forests in the Pacific Northwest: Strategies and Management Implications" (p.31). They state that "Some mixed conifer plant associations have the potential to develop dense shrubby understories when light and moisture are made available by tree thinning; this is particularly the case in dry forests that exhibit more even sized and dense structures"-which is a predominant condition in the dry forests of the Applegate, a region known for its brush fields and hardwood regeneration. They continue by stating that such understory response can "provide significant ground fuels for wildfires, thereby negating some of the positive effects of thinning on fire behavior…the potential for developing undesirable levels of understory fuels needs to be assessed on a stand by stand basis and prescriptions adjusted so as to reduce the risk of undesirable understory responses. Indeed, in some cases it may be desirable to maintain essentially full overstory cover, treating ladder fuels, and leaving all dominant and co-dominant canopy trees in place rather than risk enhancing ground fuels. This may also reduce the potential for invasive understory plants". Historically, heavy shrub response

and hardwood regeneration has been a problem in thinning treatments throughout the Applegate including stands commercially treated on Armstrong Gulch, Forest Creek, First Waters Gulch, upper Grouse Creek, Sterling Creek, Rock Creek, and other sites. The agency should consider the above listed management recommendations and address the issue of shrub response by enacting the canopy closure recommendations of the professors, rather than risk exacerbating fuel loads and laddering .

The agency should create an alternative for analysis in the EA including these recommendations on dry fir/pine sites, especially those featuring even aged and dense structural conditions, as well as those higher on the slope and on harsh exposures. In our region it is often the density of large trees, with canopies shading out understory species that minimizes shrub response and allows for open understory conditions. More open canopies have a tendency towards dense, woody understories of manzanita, madrone, live oak, deer brush, etc. This is especially true on sites where excessive cutting of hardwood species occurs and thus stump sprouting. It is also true of yarding corridors where soil is disturbed triggering germination of woody species. The density of yarding corridors in the Pilot Joe project could encourage this germination of woody shrubs on a scale that would create serious fire risk and negate many of the positive impacts of thinning. The agency should begin monitoring for this response in an effort to further identify the conditions that create such an undesirable proliferation of woody shrub species, including treatment options, soils, plant communities, yarding techniques, slope position, exposure, etc.

Roads:

The creation of new roads to facilitate logging in the Pilot Projects has and will continue to be very controversial. Local Applegate residents and collaborative members have often voiced their concerns regarding road development and its impacts. Likewise, the agency in its own document, the Middle Applegate Watershed Analysis, often recommends a reduction in road density in the Thompson Creek area to protect water quality and ESA fisheries. Cumulative impacts due to past road development and logging have reached a level of concern and further impacts should be avoided.

No new roads should be developed as part of the Pilot Thompson Project and an alternative exploring a “no new roads” option should be analyzed in the EA. New road development is associated with many impacts ranging from disturbance of hydrology, erosion, stream sedimentation, increased OHV use, illegal poaching, illegal dumping, noxious weed spread, and wildlife harassment. If new roads are implemented the roads should be monitored for the above listed impacts.

As recommended in the Middle Applegate Watershed Analysis the BLM should reduce road density in the planning area, by removing, decommissioning, obliterating, and officially closing unneeded and unnecessary roads in the watershed, especially those impacting streams and within riparian reserves. All new road construction, including “operator spurs” must be analyzed in the EA and justified in the context of local road density issues.

Spotted Owl and Pacific Fisher Impacts:

The BLM has made much of the claim that the proposed pilot projects will increase forest complexity and enhance northern spotted owl (NSO) habitat over time. Yet, this position is purely speculative and unproven. Habitat structures such as old snags proposed for retention in the pilot prescriptions may or may not actually be retained during project implementation. Likewise, damage to and removal of large hardwood species has been observed in the Pilot Joe Project, especially in yarding corridors. These impacts were not analyzed in the Pilot Joe EA, due to the claims of the agency that such habitat features will be retained. The degree to which this is reality has yet to be determined.

In many places canopy coverage will be severely reduced due to the agencies insistence that canopy thinning be part of a comprehensive strategy of fuel reduction, the idea is that by increasing forest resilience stands will maintain less mortality in the face of a wildfire related disturbance. Yet, often this canopy reduction and the associated logging simplifies and downgrades habitat in important late successional habitat. Heavy commercial thinning focusing on canopy reduction can actually increase fire risk by encouraging dense woody understories of shrubs and regenerating hardwoods. Often the stress associated with industrial logging coupled with a lack of slash removal can lead to decreased resilience to fire, insects, windthrow, and other forms of disturbance, decreasing the survivability of stands. Such logging also tends to compromise the multi-layered canopy of NSO suitable stands.

LSEE's acting as connectivity corridors should be protected and identified between LSEE's outlined in the Pilot Joe and Pilot Thompson planning areas. Acreages treated with commercial prescriptions should be spread out over time and of a small enough size to maintain connectivity between late successional areas., providing for the dispersal of late successional species. Mistletoe treatments should not be included in the pilot projects due to the frequency of use by northern spotted owls as nesting and roosting sites.

Monitoring of owl occupancy and surveying for red tree voles should be undertaken in all stands proposed for treatment. The Pacific fisher has been documented in the area and should also be monitored to evaluate its response to treatments. All LSEE's should be large enough to encompass the best NSO habitat and reduce the likelyhood of a "take" in association with the pilot projects. This is especially important given the landscape scale approach and the potential for widespread impacts as the pilot proceeds into further stages.

Treatments in Riparian Reserves:

Treatments proposed in riparian reserves should be light and designed to maintain the multi-layered canopy of more lush riparian habitat. Species preference should be adjusted to acknowledge the microclimate created by seasonal and ephemeral streams. Hardwoods, snags, shrubby understories and downed wood should be protected as well as all large overstory trees. Basal area targets should also be adjusted to maintain riparian values. Commercial treatments should avoid riparian habitat and no heavy equipment should be allow to operate within riparian reserves. Yarding corridors should also entirely avoid riparian reserves. Often riparian reserves should be included within LSEE's or "skips" to protect riparian values and late successional species that rely upon fire refugia habitat. No "gaps" should be

allowed with riparian habitat. Shade should be retained in the stream corridor to protect water quality and fisheries habitat. If experimental riparian treatments are proposed, monitoring to evaluate the effectiveness of treatments should be focused on habitat complexity, structural diversity, the development of large wood, and water quality rather than fuel reduction goals.

Age limits:

The age limit on tree removal of 150 years needs adjusting to address conditions in the Middle Applegate area and to protect the largest, oldest trees in the region. Many stands in the area are younger than 150 years old and have regenerated in response to stand replacing fire, others are "first generation forest". In either circumstance, trees younger than 150 years old, may be the stands oldest, most dominant trees and should be protected. The age limit should not be used as justification to remove large, fire resistant trees or break up natural clumps, groupings, or mature co-dominant trees. Such patchy forest distribution is a natural response to low and mixed severity fire and can help to mitigate fire severity. Uniform treatments based on spacing should be abandoned and a more variable distribution pattern encouraged in both the overstory and understory. Stand composition in the area is almost never "pure", thus large co-dominant douglas fir can naturally occur in pine dominated stands and vice versa. In fact in Norm and Jerry's "Restoration of Federal Forests in the Pacific Northwest" (p. 31) they warn against to heavy an emphasis on the utilization of the Stand Density Index or basal area targets because such methods were developed for plantation management not the management of natural fire adapted stands. They state that naturally generated "clumps" can vary from 2 to 6 individuals, are mutually supportive, and should not be broken up to meet basal area or stand spacing targets. Yet, often agency prescriptions compromise these naturally supportive and fire adapted clumps, due to economic interests. Naturally occurring clumps of overstory trees, whether even aged, mixed aged, or mixed species should be preserved on the landscape to protect and enhance heterogeneity. Groupings of trees should be retained unless the age differences are pronounced, the aggregate is creating excessive competition that cannot be addressed by thinning around these clumps, or the clump includes smaller, younger trees that create fuel ladders leading into the canopy of larger more mature trees. Where a grouping exists that appears mutually supportive, provides diversity of structure, has a similar canopy height, supports late successional characteristics such as large limbs, broken tops, interlocking branches, etc, the entire clump should be retained and thinning conducted around the grouping to reduce fire risk, stress, and uniformity.

Possibly an approach limiting the cutting of co-dominant trees could be adopted that would allow removal of large co-dominant trees based on the relative size of the trees in question. For example, a young 20" douglas fir, may be appropriate for removal if it grows from within or adjacent to the dripline of a large 40" ponderosa or sugar pine. Likewise, some large fir may be appropriate for removal when encroaching apon a large, dominant hardwood. The agency should consider implementing an approach utilizing both the 150 year age limit and a "percentile method", in which trees are ranked according to DBH and some size limit, perhaps the seventy fifth percentile, is defined. This would assure that the largest 25% of trees are left in all stands including those lacking trees in the

150 year age class. This would also assure that mid-seral trees are retained on the landscape with enough frequency that they will maintain characteristic levels of old and large trees going forward despite the unavoidable mortality of existing old growth trees. Currently the agency is removing far too many mid seral trees despite the lack of vigor in many of the areas largest, oldest trees. Opening these stands will increase drought stress, windthrow, solar heating, etc shocking existing overstory trees and leading to mortality. Such impacts can be seen on past treatments in the Armstrong Gulch, Deming Gulch, and Forest Creek regions. It is inevitable that some of these trees will succumb to the rigors of age and climate, thus "replacement" trees must be retained to encourage the forest to continue evolving and large, old trees to continue influencing the habitat. Adequate redundancy is required to safe guard forest resilience in the face of mortality due to stress, drought, insects, wind, and/or fire.

Historical data and supporting documents:

Thus far the agency has failed to document the historic conditions or list documents supporting their interpretation of historically landscapes. The agency has not given any solid evidence beyond conjecture to support the interpretation of historic landscapes, mosaics, and landscape conditions. Much of the historic evidence supporting the concept of more open landscapes due to frequent fire return intervals pertains more directly to oak woodlands and valley floor plant communities. Very little early documentation of conditions in mixed conifer stands and dry douglas fir forests can be found for SW Oregon. Although in 1899 John B. Leiberg documented forest conditions in the Ashland Watershed and found Douglas Fir forests from 3,800' to 6,200' with its best growth between 4,000' and 5,800'. He states that douglas fir forest constitutes "58% of the forested acreage west of the Cascades". It is clear that douglas fir has long been a dominant tree on northern exposures in the Applegate, it is also clear that fire suppression and historic logging have impacted the habitat of dry douglas fir stands. Yet, the question remains as to how severe that impact has been and what the historic condition of these forests was. No doubt they were somewhat more open and adapted to wildfire. Leiberg notes that low elevation fir forest generally constituted 25% p.pine, 5% s.pine, 55% douglas fir, 5% w.fir, 2% cedar, and 8% oak or madrone in the Ashland watershed and Little Applegate area. He notes that a "characteristic stand, and one which is typical contains 60% red fir (douglas fir)", some stands contained 75%-85% douglas fir in 1899. He states that "in the red fir (douglas fir) type the forest in these regions reach their maximum density, this holds good for the mature timber as well as for the seedling and sapling growth. The type never has the open aspect which characterizes stands belonging to the yellow pine type, except on areas where heavy stands of mature timber effectively shade the ground there is a good growth of many species of shrubs". Thus the regions fir forests should not be treated as they have been, with prescriptions created for east side pine forest (Johnson and Franklin 2009 p.37).

It is my contention that much of the dry fir forest in the region was significantly more open in regards to small, understory trees, yet the density of large old trees has been greatly reduced. I do not believe that historic documentation suggests that much of the dry fir forest in the region supported

stands of pine and oak as the BLM proposes. These species colonize more exposed slopes rather than the north slopes treated in Pilot Joe and tend to be found lower in elevation than much of the proposed treatment area. Although found within fir stands these early successional species may have been an anomaly or found in response to harsh soil conditions, exposures, and fire histories. Many of the proposed treatment areas are forests historically maintained and developed through the influence of mixed severity fire, yet proposed treatments are based on low severity, high frequency fire The structures developed through thinning in the pilot projects are distinctly different than those that would naturally develop with a mixed fire regime. The Applegate is a patchwork of plant communities, one of which is clearly dry douglas fir or mixed conifer, vegetative communities are predicated by a mixture of soil types, slope position, natural disturbance, and sun exposure. Many of the proposed treatment areas lie within areas predisposed to the development of mixed conifer forest due to the slope position, exposure, and historic disturbance regime. Leiberg noted in 1899 that "west of the cascades the yellow pine tracts in some places barely hold their own. Along the upper and high limits there is occasionally a decided tendency towards a larger proportion of red fir(d.fir)" he also states that pine forests embedded within fir types "are in a state of decay and are gradually being replaced by red fir which advances from the surrounding forest". Thus forest succession was well under way in 1899 and dry fir forest was a distinctive community within the lower elevations of the Applegate Valley and SW Oregon. Pine species and hardwoods were found throughout these forests in areas of shallow soil and those recovering from high severity fire and maintained by a mixed or low severity fire regime. It was the patchy and diverse nature of mixed severity fire that has shaped the forests in question, not a low severity, high frequency regime. Studies have documented a fire return interval of 9-50 years in mixed conifer forests in the Klamath/Siskiyou, with some fire free periods lasting much longer than 50 years. This creates much different structural and compositional conditions then the low severity fires of ponderosa pine forests and oak woodlands. The abundance of chaparral, the diversity of age and species, the prevalence of stump sprouting hardwoods, and the patchy distribution of the historic forest landscape, all point to a mixed severity regime and douglas fir dominated mixed conifer forest throughout much of the area. The vast amount of ancient douglas fir harvested from BLM lands between the 1950's and 1980's clearly demonstrates the ability of douglas fir to grow and regenerate over time on these sites.

Fuel Treatments and Service Contracts:

None commercial fuel reduction treatments in oak woodland and chaparral have been found to be unjustified ecologically and not restorative of historic conditions. Much of the oak habitat in the Applegate has been documented to support oak woodland rather than savanna. Yet, the agency regularly thins to wide spacing in oak habitat, encouraging noxious weeds and non-native annual grasses. In many cases many oak trees over 150 years of age have been cut, due to the small stature of oak species in the region and the agencies dogmatic spacing requirements. Time and time again, oak habitat has been degraded rather than restored by BLM fuel reduction treatments. Examples include treatments on Lick Gulch, the Little Applegate Canyon, Sterling Creek, and China Gulch. Likewise, fuel reduction treatments on chaparral sites have been shown to degrade habitat and encourage non-native species in the understory. Often treatments simplify habitat and encourage weed spread. In nearly all "non-forest" communities treatments could be described as "type conversions" rather than

“restoration”. Ample research has been conducted in the area, some with BLM funding and support, yet over the years prescriptions and treatment guidelines have changed very little. The plant communities in question are increasingly rare and threatened, and provide high quality wildlife habitat. The values these communities represent are being degraded on a regular basis by fuel reduction treatments. If the pilot projects are to “restore” such important fire adapted communities then the ecological and biological values of these communities must be acknowledged and fuel reduction prescriptions altered to be more consistent with the plant communities needs and values. I would recommend a series of workshops and public meetings to address these issues. The agency should create an oak/chaparral working group including public members and the scientific community that will define appropriate and ecologically responsible restoration treatments in these ecosystems. The retention of large “skips” and undisturbed chaparral patches within treatment areas should be encourage. Possible the agency could identify high quality chaparral habitat for retention in large chunks much like the LSEE’s, this would act to sustain the ecological values of chaparral habitat and the biological legacies needed to maintain high quality, complex habitat. Likewise, the retention of oak woodland habitat, including no cut zones and light understory thinning should be encouraged in oak habitat. Care should be taken to protect intact native herbaceous habitat by utilizing a holistic approach including prescribed fire, manual thinning, noxious weed control, and native grass seeding. If treatments in “non-forest” communities are proposed in the pilot projects, they must be restorative and based on solid ecological research. Status quo fuel reduction treatments should be abandoned and new innovative approaches based in science and ecology should be adopted. The following scientific papers offer insight into the ecology of these communities and their response to fuel reduction treatments: Please review the research by OSU scientists and others regarding fuel reduction in these plant communities .

Duren, Olivia C. & Muir, Patricia S Are Current Fuel Treatments Likely to Accomplish Restoration in Southwest Oregon Chaparral? Insights from Age Structure.

Gilligan, Laurie A. & Muir, Patricia S. Stand structures of Oregon White Oak Woodlands and Their Relationship to Environment and Distribution in Southwestern Oregon

Hosten, Paul, Hickman, Gene, & Lang, Frank 2007 Patterns of Vegetation Change in Grasslands, Shrublands, and Woodlands of Southwest Oregon

LaPerchemlides, Keith & Muir, Patirica 2006 Impacts of Fuel Reduction Thinning on Oak and Chaparral Communities of Southwest Oregon

Muir, Patricia S & Hosten, Paul A Comparison of Presettlement Vegetation and Fire Regimes in Oak Woodlands and Shrublands in Southwest Oregon

Thank you for your time,