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Scoping Comments on the Jane Hazardous Fuels Reduction Project HFRA EA

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The Oregon Chapter Sierra Club has reviewed the July 2, 2009 notice, Public Scoping Package, and maps for the proposed Jane Hazardous Fuels Reduction Project HFRA EA. We have the following comments on this proposed "fire hazard reduction" project. Our organization has participated in the initial Southern Blues Partnership – Oregon Solutions collaborative process, including previous meetings and field trips during the initial inception of this proposed project.

The Sierra Club represents over 20,000 members throughout Oregon, including the Club's Juniper Group, which has over 1,000 members throughout central and eastern Oregon. Nationally, the Sierra Club represents over one million members. Our members feel strongly about nature, wilderness, natural forest ecosystems, wildlife, fisheries, and the environment. Sierra Club members regularly enjoy hiking, camping, wildlife watching, birding, ecological study, and photography within the public lands of central and eastern Oregon, including the project area in the Malheur NF, Emigrant Creek Ranger District.

In addition to the following comments, we also join in on and reference comments, survey sheets, and information provided by the League Of Wilderness Defenders – Blue Mountains Biodiversity Project on the proposed project.

HFRA Applicability Questions

It is highly likely that the HFRA is not credibly or legally legitimately applicable for use for the Jane Project, given a number of significant requirement factors and overall proposed project actions:

- Jane is located far from residential population centers, largely in remote forests of the Emigrant Creek Ranger District. The sparse rural populations of this area fail to meet the Congressionally required levels requisite for an HFRA project;
- While the HFRA grants latitude for the use of County Community Wildfire Protection Plans in determining Wildland Urban Interface extent, conditions, and qualifications; it does not hand over the responsibility of ensuring that the Congressional intent and applicability of the HFRA is met to local counties which are often dominated politically by timber interests and objectives. It is the legal and NEPA responsibility of the USFS to ensure that county CWPP's are based upon sound foundations which meet the letter and intent of the HFRA, and are consistent with credible scientific research, expert recommendations, and environmental objectives. Before the HFRA may be employed, the Forest Service must convincingly demonstrate that the provisions of the HFRA are reasonably met by the proposed project location, actions, and objectives;
- HFRA intent is to reduce fire risks to population centers and residential structures. Scientific research recommendations note that this can be accomplished best by managing for defensible space within the close proximity of such locations, and need not extend much beyond a few

hundred feet from such areas. Project design and actions should be limited to working with local landowners and residents to ensure defensible space actions are part of the project planning from the onset. The agency must reasonably determine the actual nature of fire risk and strategically limit actions to those that have scientific support as being effective in reducing forest fire risk while maintaining natural resource qualities, wildlife habitat, ecological resilience, and water system quality.

- HFRA clearly calls for the retention of large diameter old growth trees. Trees begin to become inherently fire resistant as they mature and grow in girth and bark thickness. Generally trees between 10" to 12"dbh, and most trees above 12" dbh, are inherently fire resistant, and as such cannot legitimately be considered fire risks or "hazardous fuels." Former Forest Service Chief Dombeck is quoted as stating that there is not valid rationale for removing trees above 12" dbh to reduce fire risks.
- Scientific controversy exists regarding the removal of trees utilizing commercial logging thinning. Generally, contemporary science does not support the removal of any trees with mature and old characteristics regardless of size or condition, and does not support the removal of trees above 14" to 16" dbh. In the Malheur NF, trees above 14" to 16" dbh are lacking throughout much of the forest, due to past logging and other management actions. As such these trees are needed for forest ecological structure and wildlife habitat for the region's many imperiled species of concern evidencing declining population trends and loss of habitat.
- Scientific research largely does not support logging-thinning in mixed conifer, mixed fire severity forests to reduce fire risks or for rationales of forest resilience to disturbance events. It is important that the Jane Project be well founded on scientifically supported actions – with full disclosures of supporting science recommendations and research conclusions, and that analysis disclose areas of scientific controversy and contention when proposed actions diverge from credible research conclusions.
- In general, given the remote location, the growing scientific controversy since HFRA was adopted, and the desire of the agency to build common ground between all interested parties, from conservation organizations, area residents, public officials, and timber and ranching interests, we strongly recommend the agency weigh all these factors and utilize the full non-HFRA NEPA analysis process for this project from the onset.

Jane's purported "fuels reduction" premise

The purported purpose and need for this project is at best scientifically controversial, and given the levels, extent, and impacts of the commercial logging proposed, is largely scientifically insupportable. The following article from the spring 2009 issue of the Sierra Club Conifer-Wild Juniper Journal addresses the problematic issues inherent in the potential failure to found the Jane project on available applicable scientific research and recommendations:

Restoring Forest Wildlands
by Asante Riverwind

Approaching Nature in humility beyond assumed knowing, in intuition and perceptive awareness inspired by wonder and awe at the depth of inter-relational complexity inherent in Earth's ecosystems, far beyond the capability to fully grasp in a thousand lifetimes; we may realize nature is ever on a path of resilience, regeneration, and recovery. Patient in inherent wisdoms, nature is our wisest of teachers. It is not for us to "prescribe" treatments for nature; rather 'tis for us to emulate nature's dance and flow. Following ecological paths of balance and least resistance; learn to enjoy, live, and work with nature in harmony and appreciative respect, sustainably beyond the generations yet to be….

Scientists have postulated that we are past the “global tipping point,” with industrial impacts bringing unprecedented global climate change. With global pollutants, development, resource depletion, and exponentially increasing human population; changes to Earth’s ecological systems will continue exponentially for many decades even if root causes were somehow halted today. Basically, we’ve just begun this “wild” Earth changes ride, with the climax yet far from sight.

Yet, Earth’s ecological systems are resilient, adapting beyond our ability to fully understand. In the Pacific Northwest, our forest ecosystems are ecologically dynamic systems of complex biodiversity. Resilient, our forest systems are not truly in “crisis” or at risk of “catastrophic” calamity. European humans did not arrive in the western hemisphere “just in time” to save nature from committing ecocide. This is not to imply that societal intrusions and alterations of natural forest ecosystems have not resulted in ecologically harmful consequences, or that there is not a consequent potential for beneficial forest restoration and protection. However, such management must learn from and work with natural ecological processes, rather than attempt to remake forests to fit societal concepts and desires.

How do we help ensure restoration projects are held within acceptable ecological bounds? Projects must be based upon credible science substantiating an ecological "purpose and need" - if thinning for fires or insects, scientific research must be followed. Science shows thinning is not appropriate in mixed conifer, mixed fire severity forests. Science shows the infeasibility of logging to effectively address insects, especially in lodgepole pine and mixed conifer ecosystems. Scientific research guides projects to provide for the habitat needs and recovery of imperiled forest wildlife. Restoration science addresses the foundationally important role of soils and soil microbial communities, and the harmful impacts of excessive thinning and mechanical equipment. Scientific research addresses the protection and restoration of watersystems and aquatic species. Research recommends habitat and seasonal protections for avian species, and addresses the harmful impacts of extensive thinning to nesting, fledging, foraging, and hiding habitat, (research does the same for small mammals). Research recommends protection and recovery of rare native plants, and measures to prevent the introduction and spread of exotic invasive plants. These significant restoration objectives must be incorporated into recovery projects.

Understanding, let alone restoring complex forest ecosystems, is a challenging process at best. Some forest projects claiming to be restoration have proven to be so ecologically harmful that they need to be stopped outright. The fall 2008 legal victory stopping the Five Buttes timber sale in the Deschutes helped establish some initial legal, scientific, and ecological precedents for projects purporting to be restorative.

Over the past couple years, by working with federal agencies, ecologically inappropriate areas for thinning, including mixed conifer units, moist north slope areas, and high elevation areas have been dropped from unwarranted logging-thinning plans. Up to 30% of areas have been dropped for natural structure and cover. Diameter limits on cutting (16" in recent appeal settlements) help protect forest structure, habitat, and ecological integrity, along with provisions to retain all mature and old characteristic trees regardless of size.

Collaborative processes allow the involvement of local citizens - a recent HFRA thinning timber sale south of Bend had twelve residents join us in filing their own objections and changing the project to incorporate many of the above protective provisions. Where needed, conservation organizations must still be prepared for litigation, if this is the only recourse to protecting the ecological integrity of area forests.

There is a growing push to open public lands to "landscape scale thinning” (for fires, insects, disease). Plans for such projects range up to 35,000 to 50,000 acres over a ten-year period. Federal agencies must be held accountable to credible scientific recommendations, addressing not just the density of trees, but the protection and recovery of forest ecosystems and biodiversity. Protection and restoration of forest soils, soil microbial communities, and hydrology - the foundation of resilient forest ecosystems - must fundamentally guide such projects. Similarly, the recovery and protection of imperiled species populations and habitat must be an essential goal of this process.

We must heed caution that today’s “thinning” mania echoes past similar processes in Europe, where there was an attempt to "clean-up" the forests. Today affected forests are lacking in biodiversity,

wildlife, natural integrity, resilience, and vigor. Hopefully at least we will not repeat the deforestation and desertification accomplished by civilizations of the past - with far less technology and mechanical equipment than available today. Such ecological ruin is still visible in the blowing dusts, sands, and denuded lands of vanished forests spanning across continents and islands from the Pacific Ocean through Asia, and the Mideast, along the continuum to the Mediterranean (archaeological records show Rome before its fall was concerned with deforestation and recycling). This continuum now extends from the sickly forests of Germany, to this hemisphere with our fragmented forests still caught in the grasp of irreparable logging and other management harms.

Ecological impacts have come full circle; as a global society we either learn from and not repeat the mistakes of the past or - with even greater speed given the available technology and population - continue to unravel earth's natural global ecosystems, exacerbating escalating climate change and ecological instability. Forests play integral roles in earth's ecological functioning. Carbon storage, oxygenation, fresh water systems, treasures of biodiversity - natural forests are irreplaceable and critically important in these "global warming" times.

Forests are also among the last natural refuges from mechanized society, with its incessant noise, stress, and ceaseless varied work. Do we want or need to unleash scientifically controversial large-scale mechanized logging loose throughout our remaining forests - replacing nature's serenity and solitude with mechanized mayhem?

In other words, let's be careful what "well-intentioned" management we unleash on public forest ecosystems. The track record of human management is a litany of "good intentions" gone awry - from clear cuts to supply a growing nation with timber; to creating access to public lands with the largest worst maintained road systems on earth; to "improved selective" logging of "decadent-dying" old growth and the replacement “plantations” of "young vigorous seedling trees;" to efforts to "clean-up" remote forest streams and waterways by clear cut logging; to harmful postfire "salvage" and "forest health" logging of old growth; to the growing call for landscape scale logging-thinning to "reduce the risk of fires, insects, and disease" and generate a "sustainable supply of wood" to economically faltering mills. Looking at the track record of impacts and scientifically disproven or questionable rationales, it appears insatiable society simply learns deviously new phrases to continue unsustainable demands upon forests and nature.

If agencies are sincere about reducing the risks of uncharacteristic fires and disturbance, restoration must begin by repairing the ecological deficits of the past, rather than incurring new deficits. Initial priorities include the ecological removal of existing slash piles, and the removal of harmful unmaintained roads - returning these to natural contours and native vegetation; projects should focus on restoring degraded salmonid waterways; focus on habitat protection and the recovery of imperiled forest species; revegetation of the region’s numerous under-regenerated old clear cuts; etc. Initial restoration objectives could help establish ecological guidance for public lands management; necessary to prevent scientifically controversial landscape projects from becoming just another "less bad" timber sale, with yet another range of harms to forest ecology and biodiversity.

Hopefully humans will someday learn humility - that nature is ever on the path of resilience and self-restoration, healing from the degradations of human tampering. By protecting forest ecosystems, assisting and allowing natural processes rather than remaking nature based upon our limited understanding and assumptions, we may begin to repair the harms of the past, and responsibly address climate change issues affecting the future.

The Jane Project Must Avoid Ecologically Harmful and Insupportable Logging Plans

The Jane project has many inherent problems as proposed. The following are among some of these with the strongest levels of conservation concern and scientific contention:

- Proposed logging of inherently fire resistant trees
- ***Concerning the “fuels reduction” purpose and need:*** Forest structure naturally is composed of flammable organic vegetation, including living and dead brush and wood fiber. Fires, including

"high-intensity wildfires," are natural components of forest ecosystems, without which such systems would cease to exist. The stated purpose and need must be further qualified to bring this objective into consistency with the area's natural ecological cycles and functioning, accurate site-specific conditions, and with the recommendations of scientific research pertinent to the area's varied plant association community mosaics. What are the naturally occurring variations in fuel levels in area forests pertaining to plant association, localized moisture, and slope aspect variables that have occurred during the past two hundred years? It is likely that during fluctuating fire cycle intervals varying levels of fuels naturally accumulate. Some of the project area has experienced fires during this past century, with some areas having experienced relatively recent fires. It is likely these areas are not much out-of-sync with natural fuel levels and fire return intervals. Analysis must provide fire history information, and base project actions on scientifically supported methods to return the area's complex forest systems to natural fire cycle patterns, vegetative and structural compositions, and ecological processes pertinent to the localized mosaic of plant association compositions, and moisture and fire patterns.

- As noted above, much of the project area is in ecologically important interior forest wildlife habitat far from human communities;
- ***Fire and fuel load variables:*** Fire intensity patterns vary across the landscape. A significant portion of the proposed project area appears to be located in naturally varied mixed fire severity forest systems. Even ponderosa pine dominated forests, often purported to be low-severity fire systems, are over time actually on the lower intensity continuum of mixed fire severity systems, and as such occasionally burn severely to fluctuating extents as part of their natural ecological cycles. The area's overall forest mosaic patterns are dependent upon naturally fluctuating recurrent cycles that span the range of low intensity to mid and high severity fires. Complex ecological functioning, biodiversity, plant association group mosaics, and overall forest resilience is dependent upon ongoing dynamic natural fire cycle variations in fire severity and extent. Forest pathogens are in-part kept within natural check and balance patterns by fire cycle variations. Essential wildlife habitat quality, including foraging species biodiversity and abundance, as well as variable forest structure including dense stands/hiding and thermal cover, meadow openings, plant abundance, etc are dependent in-part upon fluctuating natural fire patterns. Soil communities and functioning are dependent in-part upon fire cycle fluctuations which provide nutrients, replenish depleted forest soils, and re-arrange the ever-changing dynamics of forest stand and vegetation compositions and species habitat locations. This purpose and need must incorporate the ecological realities and scientific research knowledge pertaining to the area's dynamic low and mixed severity forest stand mosaic compositions and cyclic patterns. Forests are not static. Objectives should be to work towards the protection and maintenance of natural ecological processes and resilience, which is ever-ongoing within nature. As such, the planned commercial logging as proposed is premised largely upon simplistic scientifically insupportable and ecologically erroneous assumptions. The NEPA analysis for this proposed project must responsibly disclose and address the range of scientific controversy and recommendations pertinent to the restoration and resilience of the area's forest ecosystems, wildlife, waterways, and ecological processes.
- ***Logging for insects and disease and associated fuel load rationales:*** As with the complexity of dynamic ecological processes noted above, insects and disease are inherent, beneficial, and necessary components of forest ecosystems. At times even landscape to large-scale infestation by insects and disease naturally occur across significant portions of forest systems. However, current levels of insects and disease are far from either landscape or large-scale at present, nor have sufficient conditions been identified to credibly ascertain that such widespread levels of insect or disease caused tree mortality is likely at any time in the foreseeable future to occur on a scale that would be detrimental to long-term natural forest functioning, and resilience. Insect and disease

levels within area forests are generally well-within natural variable endemic levels, and are largely very beneficial to forest structure, wildlife habitat, and soil community functioning. The NEPA analysis must disclose and assess the applicable scientific research related to natural ecological processes, including insects and disease, and the wildlife and invertebrate species dependent upon forests insect and disease tree pathogens, and the "fuel loads" these may produce, for sustenance and habitat. Project analysis must disclose and address applicable scientific research that strongly recommends against commercial logging to influence or "reduce" insect and disease activity; noting that such logging is incapable of achieving the purported goals above, and instead results in significant adverse harms throughout the forest ecosystem that actually can result in exacerbating tree mortality and other impacts of insects and disease. As with fires, natural forest ecological processes bring inherent and fluctuating levels of resilience to the impacts of insects and disease. At times, insects and disease levels must peak to perform needed soil nutrient replenishment; natural stand thinning; changed localized stand and vegetative structure and compositions; boosts to predator species populations, habitat, and sustenance sources; preparing the course for the next ongoing phase of changing forest mosaic cycles and patterns. Mechanical manipulation through logging – other than very limited scientifically controversial small diameter tree and brush removal that is largely of little or no commercial economic value – has been well-proven through a significant number of scientific studies to be overall detrimental to forest resilience, both in the short and long-term. The purported risk of a western spruce budworm outbreak is at best exaggerated and misinformed, and largely fails to accurately disclose and asses the natural cycles and primarily beneficial roles of western spruce budworm, including during their erroneously-called "outbreak" stages. Largely scientific research concluded that increases in western spruce budworm activity generally coincide with prolonged dry periods, and that trees and insects have a symbiotic relationship wherein defoliation reduces the loss of moisture through needle transpiration, allowing trees to build up starch reserves in the roots. Defoliation can also naturally thin trees, providing snags, fallen log habitat, and replenishing soil nutrients. Surviving trees, including those up to 90% defoliated, evidence decades of increased radial growth and vigor over adjacent trees which were either not defoliated or were only partially so (due to the starch reserves build up in their root systems and more available moisture as less was lost through transpiration).

- ***Commercial logging in aspen stands***: Hardwood communities including aspen, cottonwood, and others; and RHCA objectives; are best enhanced by addressing the root sources of unnatural conditions. First and foremost among these are livestock grazing and changes in hydrological flow patterns caused by water diversions, and unnatural changes to soil and plant communities. Roads also impair and divert both surface and subsurface hydrological flows from prior natural patterns most hardwood communities depend upon. Logging also reduces moisture and nutrient availability, harms complex soil communities, and opens areas to trampling from livestock as well as – to some extent - native ungulates. Management actions in RHCAs must be consistent with credible non-controversial science research and recommendations, and largely must protect and maintain ongoing natural recovery and resilience processes in these areas. Removing livestock from RHCAs for a minimum of ten years is a foundational requisite for hardwood and riparian plant community recovery. Removing roadbeds located in or adjacent to RHCAs and restoring hydrological subsurface soil flows can be beneficial. Preventing the introduction and spread of invasive exotic plants, and reducing or removing current invasive plant populations with ecologically benign methods are also essential. Returning diverted waters to affected watersystems, and removing unnatural consumption demands upon available waters – such as livestock – is important to achieving this objective. Restoring natural fire cycles may also help, provided that this does not entail harmful mechanical equipment use and logging in these areas, and providing that livestock are prohibited from affected areas for at least ten years. Theoretical "conifer encroachment" in aspen and hardwood community areas generally only feasibly applies to small diameter young trees that may have grown in frequent fire areas since the last local fire.

However, most RCHAs are actually infrequent mixed and high fire severity areas, and as such naturally had considerable vegetative and conifer growth occurring between less frequent or variable fire cycles. As such, any proposed removal of conifers in these areas must comport with the actual natural range of variability and scientific research pertinent to proposed action locations. The project analysis must disclose and address pertinent science and develop ecologically sound action alternatives that address root causes of RHCA impairment, and hardwood community abundance and resilience issues. Action alternatives should not involve scientifically insupportable or controversial logging, machinery, or road building in or near RHCAs, or in hardwood communities. Our organization strongly opposes commercial logging in aspen stands, and associated riparian and high wildlife habitat value areas.

- ***Logging in old growth areas:*** Science generally notes that old growth forest structure is dependent upon complex interwoven natural ecological processes; that nature is ever on a course of self-restoration and resilience; and that protecting natural ecological processes and forest conditions is the best management course to maintaining and increasing the abundance of LOS stands. Science generally does not support commercial logging as a feasible action capable of attaining or maintaining old growth structure. Old growth is not a 'product' that can be artificially manufactured or retained by commercially logging and adversely tampering with natural forest ecosystems. Logging and road building fragmentation, soil community disturbance, compaction, and hydrological impairment caused by logging is antithetical to old growth forest structure and resilience in both the short and long term. The analysis must disclose the full range of credible scientific research pertinent to this project's ecosystems, ecological processes, salmonid watersystems, and wildlife. The project's developed alternatives must be based upon scientific research. If some developed alternatives are premised on scientifically controversial assumptions and actions, other action alternatives must responsibly and objectively embody the recommendations of conflicting science. Proposed actions must provide verifiable evidence that alternative actions are capable of actually achieving the project's stated goals, and must disclose scientific research that calls into question the efficacy and basis of proposed actions. Our organization strongly opposes commercial logging-thinning in old growth areas, recommending instead either strategically located limited edge-area small diameter thinning accompanied afterwards with either reintroduced or natural fires, or leaving the area to ongoing natural recovery processes.

The Proposed Jane Project must be consistent with pertinent scientific research and must meet the analysis requirements of the NEPA

In addition to the above issues, the NEPA analysis must address the following also:

- Are current deficiencies of large late and old forest structure within RHCAs the result of past logging, natural or human caused fires, livestock grazing, other conditions, or a combination of factors?
- Is ongoing livestock grazing contributing to current deficiencies in hardwood plant species and water quality?
- What are the past century's fire histories (occurrences, natural mosaic fire intensity and extent patterns, suppression incidences and extent of effectiveness, fire causes)? What are the natural ranges of variability in the natural fire frequency and severity patterns for project area forest stands? How do these patterns vary dependent upon elevation, moisture patterns and hydrology, and forest stand Plant Association Groups across project area forests? What are the cumulative changes to natural forest conditions, forest soil communities, moisture availability, and hydrological functioning that have occurred over the past century, and what are the past and ongoing causes of these changes?

- Utilizing a multiple centuries-long assessment (as feasible) of the area's natural range of variability and climatic fluctuations; are current forest conditions, including 'fuels' levels and fire patterns, within natural variable fluctuations for the area forest's Plant Association Groups? For example, mixed conifer mid elevation and north aspect forests tend to burn less frequently, with natural accumulations of dead woody materials and increasing stand density and complexity over time between longer periods of recurrent mixed fire severity cycles. Some lower elevation and south-facing ponderosa pine dominated PAGs generally have more frequent recurrent fires and less build up of woody debris and understory vegetation. It is important that project planning be tailored to fit, rather than unwisely tamper with, natural ecological processes and functioning.
- There is no need to include commercial logging as proposed to achieve the project's purported ecological objectives. Indeed science research documents significant harms from commercial logging that are antithetical to the project's stated purpose and need; and largely recommends against any commercial logging removal of trees and forest structure in mixed conifer, mixed fire severity forest stands. For drier more frequent fire ponderosa pine forest stands there exists a varying range of scientifically controversial research and recommendations pertaining to limited levels of thinning small diameter trees in areas where three or more fire cycles have been missed and young tree and brush density levels are unnaturally high. Such research however, recommends strongly against the removal of trees that exhibit inherent fire resistant characteristics, as once removed these are soon replaced with more fire-prone trees and brush.
- To the extent that the stated ecological goals can be met, in addition to providing for the wildlife viability requirements of the NFMA and to protecting natural resource concerns including ecological functioning, forest soil communities, aquatic species, and water quality can also be met; it may be that there could be a limited component of small diameter wood resources resulting from the proposed project. However, economic objectives must be defined by scientifically supported ecological needs, and precluded at the onset from unduly influencing or directing project design and development.
- All thinning slash must be removed from the area within one year, as by the second year's summer season it would contribute significantly to greatly increased unnatural risk of severe fires in the project area, which would be antithetical to the purported project goals.
- Road density is already high in much of the project area. The agency already has far too many roads that it is incapable of maintaining, and which harm wildlife, aquatic systems, and forest ecological integrity throughout the area. There should not only be no new roads of any kind, including so-called "temporary roads" anywhere in the project area; the project must instead remove roads and restore roadbeds to natural forest topography and vegetation, and bring density levels into compliance with the LRMP and wildlife thresholds. The only feasible exception to this would be the removal of poorly located resource harming roads and the replacement of these where needed for travel with ecologically responsibly located roads – given due care to protect old growth trees, hydrology, waterways, and ensure the road is truly needed and that the area would not be better restored by removing the road entirely and not replacing it.
- Roadless areas, including uninventoried ecological unroaded areas, old growth areas, and mixed conifer mixed fire severity areas must be disclosed and protected from project actions, so that natural processes continue untampered with in these ecologically significant areas.
- Old growth and mature forest stands, connective habitat, RHCAs, and areas of ecological and recreational significance must be protected from management disturbance actions.

The NEPA analysis must develop viable plans to protect, maintain, and recover listed species, species of concern, and indicator species populations, habitat, distribution and abundance throughout the project area.

Scientific Controversy

As noted above, the actions proposed in the notice for the Jane Project are scientifically controversial at best, and largely not supported by credible scientific research recommendations. Conservation organizations have provided the Malheur National Forest decision makers and planning staff with many full scientific research reports, studies, recommendations, and articles (as well as extensive supporting site-specific surveys, photos, and graphs) related to issues of scientific controversy and complex forest conditions. We again request that this research be reviewed, disclosed in the NEPA analysis, and incorporated into developed alternatives and selected project actions as required by NEPA, Presidential directive, and environmental policy law. Below is a list of science exhibits sent previously to region's Forest Service decision-makers and planners, which should be accessible to agency planning staff. If you do not have any of these scientific reports, please let us know which ones are needed, and we will promptly send these to your planning staff for review and inclusion in the Jane Project NEPA analysis. As science, similar to natural forests, is not static, we will also be updating our research exhibits and will provide additional pertinent studies as these are added. Recommended scientific research studies addressing the complex varied issues of forest restoration and resilience, natural disturbance cycles and patterns, fire risks reduction, imperiled and species of concern recovery and habitat, climate change and carbon sequestration, soil communities and hydrological functioning, and other pertinent resource management concerns:

I. Fire Thinning Science Volume I *Contents*:

1. Effects of Fire and Post-fire Salvage Logging on Avian Communities in Conifer-dominated Forests of the Western United States (Kotliar, 2002)
2. Fire on the Mountain: Birds and Burns in the Rocky Mountains (Kotliar, 2005).
   The collective influence of fire and human activities on the landscape influences avian community structure and dynamics.
3. The Effects of Postfire Salvage Logging on Cavity-Nesting Birds (Hutto & Gallo, 2006).
4. Appeal from the United States District Court: Appeal the district court's denial of preliminary injunction to halt the implementation of several United States Forest Service post-fire logging sales in the Umatilla National Forest.
5. Fire, Fuels and restoration of ponderosa pine-Douglas fir forests in the Rocky Mountains, USA (Baker et al, 2005).
   A restoration model based on low-severity fire modeling, focusing on thinning and prescribed burning to restore historical forest structure.
6. Be careful what you wish for: the legacy of Smokey Bear (Donovan & Brown, 2007).
   An alternate approach to wildfire management.
7. Postfire management on forested public lands on the western United States (Beschta et al, 2004).
8. Overstory and understory development in thinned and under-planted Oregon Coast Range Douglas fir stands. (Chan, et al, 2006).
9. Postfire logging hinders regeneration and increases fire risk (Donato, et al, 2006)
10. Postfire logging hinders regeneration and increases fire risk (Donato, et al, 2006)
11. Postfire impacts on forests and wildlife (Hutto, 2005)
12. Executive Summary: Interim protection for late successional forests, fisheries and watersheds (1993).
13. Study: Reforestation rich after fires: looking at the aftermath of wildfires in the forests of southwestern Oregon and Northern California (Barnard, 2007).
14. Fire regime considerations: Key issues in fire regime research for fuels management and ecological restoration (Veblen, 2003).
15. Forest Dreams, forest nightmares: An ecological and economic look at the Blue Mountains and the changes that have taken place since settlement (Langdon, 1995).

16. Preemptive and salvage harvesting of New England forests: When doing nothing is a viable alternative, (Foster & Orwig, 2006).
17. Changes in downed woody material and forest structures after prescribed fire in ponderosa pine forests, analyze changes in downed woody material and forest structure (trees and snags) measured within one year after prescribed fire treatments completed in Arizona and New Mexico in order to see effects on wildlife populations and their habitat (Saab).
18. Toward meaningful snag-management guidelines for postfire salvage logging in North American conifer forests. Effects of postfire logging on black-backed woodpecker and cavity nesting birds (Hutto, 2006).
19. Birds in the black: *Through following avian wildlife, a UM scientist has discovered that burned forests play a critical role in the health and diversity of the Western landscape* (Jamison, 2005).
20. Research Article: A landscape model quantifies error in reconstructing fire history from scars. *Errors in reconstruction may lead to a misunderstanding of the role of fire or incorrect restoration prescriptions. Here, a stochastic landscape model is used to quantitatively assess the accuracy of a commonly used statistic* (2005).
21. Logging to control insects: The science and myths behind managing forest insect "pests". (Black, the Xerces Society for Invertebrate Conservation, Portland, Oregon, 2005).
22. Neo-tropical migrant and native birds: The impacts of timber logging on neo-tropical migrant and native birds.
23. Fire severity in conifer forests of the Sierra Nevada, California (Odion & Hanson, 2006).

    A study of both spatial and temporal patterns of contemporary fires in the Sierra Nevada Mountains, California and how they are linked to species diversity.
24. Fire ecology of Ponderosa Pine and the rebuilding of fire-resilient Ponderosa Pine Ecosystems (Fitzgerald, 2005).
25. Research Proposal: Post fire management of snag forest habitat in the Sierra Nevada, (Hanson, 2006).

    Investigation of the association of three woodpecker species with four habitat strata following fire in the Sierra Nevada, assessment whether one species in particular, the Black-backed Woodpecker, may generally be restricted to forest recently burned at high severity ("snag forest habitat"). Also investigates the factors that best explain post-fire conifer mortality, and thus the creation of snag forest habitat, as well as the extent of natural conifer regeneration in snag forest patches that are left unmanaged following severe fire.
26. Scorched forests best left alone, study finds. Biscuit salvage – Logging after the fire killed seedlings and added tinder, research by an OSU-led team says. (Milstein, 2006, Oregonian).
27. Summary Report – Winter habitat use by Spotted Owls on BLM within the boundaries of the Timbered Rock fire (Andrews & Anthony, OCFWRU, DFW, OSU, 2004).
28. Short-term effects of wildfires on spotted owl survival, site fidelity, mate fidelity, and reproductive success (Bond et al, 2002).
29. Associations between forest fire and Mexican Spotted Owls, (Jennes et al, 2004).
30. Stress (Waring, OSU, 2004)

    A brief analysis of the kinds of tolerance and avoidance mechanisms that trees evolved to withstand specific stresses.
31. Studies to find danger to forests in thinning without burning (Robbins, New York Times, 2006).

    Missoula, Montana – Thinning forests without also burning accumulated brush and deadwood may increase forest fire damage rather than reduce it, researchers at the Forest Service reported in two recent studies.

32. Thinning and nitrogen fertilization in a Grand Fir stand infested with Western Spruce Budworm. Part IV: An ecosystem management perspective (Waring, 1992).

Allowing pine forests to be replaced with fir through fire protection and selective logging has increased the nitrogen demand beyond that readily supplied in the ponderosa pine/true fir type. Fertilizing with one application of nitrogen at the time of an insect outbreak may reduce mortality and associated fire hazard through a period of up to 5 years.

33. United States Court of Appeals – Oregon Natural Resources vs. Timber Products.
34. Assessment of site index and forest growth capacity across the Pacific and Inland Northwest U.S.A. with a MODIS satellite-derived vegetation index (Waring et al, 2006).

Foresters, scientists, and policy makers would benefit if region-wide maps of potential forest productivity were available at decadal intervals to record changes, seek causes, and plan for the future.

35. The watershed impacts of forest treatments to reduce fuels and modify fire behavior (Rhodes, 2007). (Pacific Rivers Council)

This report examines the effects on watersheds and aquatic resources from forest fuel reduction treatments aimed at modifying wildland fire behavior on public lands.

Fire & Forest Science Vol. II Contents:

- Wildfire Charcoal and Soil Processes, Thomas H. DeLuca et al
- Contributions of Pinus Ponderosa Charcoal to Soil Chemical and Physical Properties, Christopher M. Briggs in Briggs, Breiner, Graham, 9 May 2005.
- Chemical composition of forest floor and consequences for nutrient availability after wildfire and harvesting in the boreal forest, E. Thiffault[1] , K. D. Hannam[2], S. A. Quideau[2], D. Paré[1], N. Bélanger[3], S.-W. Oh[4] and A. D. Munson[5] , March 2008.
- Nitrogen mineralization and phenol accumulation along a fire chronosequence in northern Sweden, Zhanna Yermakov[1, 2] and David E. Rothstein[1], May 2006.
- Changes in understory composition following catastrophic windthrow and salvage logging in a subalpine forest ecosystem, **Cristina M. Rumbaitis del Rio,** 2006
- Contributions of Pinus Ponderosa Charcoal to Soil Chemical and Physical Properties, Christopher Briggs, 2005.
- Biochar: A Soil Amendment that Combats Global Warming and Improves Agricultural Sustainability and Environmental Impacts, recent report compilation of scientific research.
- Communication on BioChar and its implications for forest and societal management, and role in ongoing climatic change.
- Biogeochemical Consequences of Wind and Salvage Logging Disturbances in a Spruce-Fir Forest Ecosystem, C.M. Rumbaitis-del Rio and C.A. Wessman.
- And Several Additional New Studies also….
- **Neotropical Migrant & Native Birds research.**
- **"Forests, Fires, Resilience & Restoration" Sierra Club Presentation.**

Forest Ecological Science and Legal. Vol. III

- Obama Order on Scientific Integrity (also within the text of the appeal);
- Avifaunal Response to Fire…, N. Kotliar et al, 2007;
- Oregon Biodiversity in a Changing Climate, J. Lawler et al, 2008;
- Public land, timber harvests, and climate mitigation: quantifying carbon sequestration potential on US public timberlands, Depro et al, 2007;

- Testimony before the House Subcommittee on National Parks, Forests, and Public Lands… M. Harmon PhD, March 3, 2009;
- Forest fuel reduction alters fire severity and long term carbon storage in three Pacific Northwest ecosystems. S. Mitchell, M. Harmon, K. O'Connell;
- 50 Year Trend in June Temperature, 1951-2006, E. OR, E. CA, ID, S.W. MT, NV, UT, W. WY;
- Olympic Forest Coalition vs. USFS, Case #CO7-5344 RBL, 5-09-08;
- Impacts of timber harvesting on organic matter…, M.F. Jurgensen, 1996;
- Citizens for Better Forestry et al vs. USDA et al, Case # C 08-1927 CW, 6-30-09;
- Surveying the NEPA and the Emerging Issues of Climate Change,…, J. Mendelson III;
- Court Rulings on Climate Change…;
- Fire Ecology in Rocky Mountain Landscapes, W. Baker 2009;
- Historical and Anticipated Changes in Forest Ecosystems of the Inland West of the US, W. Covington et al, 1994;
- Aspen Regeneration in the Blue Mountains of NE Oregon, D. Shirley & V. Erickson, 2001;
- Mountain Pine Beetle Issues in the Western US, G. Wuerthner, 2009;
- Implementation of National Fire Plan Treatments Near the Wildland Urban Interface in the Western US, T. Schoennagel et al, 2009;
- Beetle Infested Forests Are Not "Destroyed", M. Rocca & W. Romme, 2009;
- Changes in Native and Non-Native Fish Assembleges and Habitat Following Wildfire (MT), C. Sestrich, 2005;
- The European Spruce Bark Beetle – From Pest to Keystone Species, J. Muller et al, 2007;
- Bark Beetle Outbreaks and Regeneration, M. Jonasova & K. Prach, 2004;

In the Jane Project analysis, we herein request that the agency specifically identify what scientific studies, recommendations, and conclusions support the proposed logging, thinning, and other project actions. We request that these disclosures be specific, rather than a mere listing of studies and vague, out of context, references to studies for this project. We herein request, at the onset of this proposed project, that the Forest Service specifically cite the scientific reports, and their clear conclusions and recommendations, that it plans to found its proposed Jane Project management actions upon. We also request the agency specifically address the recommendations and research conclusions of the above pertinent scientific studies, disclose and address issues of scientific controversy, and develop a full range of scientifically credible action alternatives capable of achieving ecological objectives of restoring and maintaining the forest ecosystem resilience, carbon sequestration, ecosystem functioning, integrity, connectivity, and abundant viable biodiversity of the proposed project area.

Preconceived, Contrived, Unfounded Pre-Analysis Plans

The Jane Project is only in its scoping phase, with environmental analysis not yet begun or completed. Yet the scoping notice proposes a series of preconceived contrived logging actions, complete with maps of unit locations. Such a notice violates NEPA's clear requirements that projects be well founded in accurate site-specific analysis, science, expert advice, and high quality information. NEPA also mandates meaningful public involvement and admonishes against contrived preconceived actions. As no comprehensive analysis yet exists, there is not factual, scientific, or environmental basis for the proposed actions and unit locations at this time. We strongly request these be withdrawn and a legally compliant scoping notice be issued which discloses the general analysis objectives, conditions, resource concerns, area species of concern, cumulative and ongoing impacts in the area, and sets a direction for legitimate scientifically founded project analysis and alternative development.

Violations of objective scientifically based NEPA analysis and meaningful public involvement

As proposed, we have serious ecological and legal objection to the Jane Project, which largely fails in its assumptions to be based upon credible science, and the natural variability of the area's ecological processes, functioning, and resilience. NEPA requires project analysis be objective, and fully disclose area conditions, pertinent science, and ecological and listed-species maintenance and recovery needs. NEPA prohibits analysis processes being misused for preconceived projects with forgone conclusions already in place. This is just the scoping period for the Jane area, and as such the notice should not be already proposing mapped out logging units and planned actions. Instead, this phase of the public NEPA process mandates meaningful scientifically sound, environmentally accurate objective analysis and public involvement. Instead, based purportedly upon the above presumptive and largely scientifically simplistic and insupportable "purpose and need," the District discloses the Jane project already involves:

- Commercial logging thinning up to 21" dbh as part of "biomass removal," riparian, wildlife corridor, and steep slope actions on 10,796 acres of forest;
- Commercial logging across 9,363 acres apparently using ecologically damaging heavy ground based machinery, and removing trees up to 21" in diameter. As noted above such actions are in contravention to the majority of peer reviewed credible restoration and wildlife recovery scientific research;
- 321 acres of logging in aspen and cottonwood stands (we strongly recommend that any actions in these areas be limited to non-commercial restoration actions only);
- biomass removal across 1,193 acres of wildlife corridors, in contravention to the recommendations of credible wildlife science for the species of concern in this area, due to adverse impacts to habitat values, cover, connectivity, and overall disturbance on habitat for the duration of the project and a number of years of post-project ecological recovery;
- No disclosure of possible Forest Plan amendments associated with the proposed project;
- No disclosure of ESA, regional, and state listed species and species of concern that may be within the project area, and no information on species population status and trends, or on potential project impacts, objectives, or concerns related to species recovery objectives and habitat protection;
- No disclosures of water system quality listings (Oregon State 303(d) list) or listed aquatic species and species of concern that may be within the project area – or of project actions to restore these areas;
- No disclosures of cumulative impacts or simultaneous project implementation and management analysis that is or may occur within the proposed project area (active grazing allotments and impacts, ORV use and impacts in the area; other adjacent potential projects;

Scientific Recommendations and Ecological Accuracy

The project notice's proposed actions appear at best to be based upon scientifically controversial assumptions, goals, and management methods. Whether the agency's proposed actions will effectively and appropriately 'reduce fuel loads' is both ecologically simplistic and likely to depend upon the degree in which these actions embody scientifically supportable ecologically appropriate methods to effectively address naturally occurring forest fuels, fire risks, and naturally inherent insect mortality in forest ecosystems.

As this project begins its NEPA analysis, it is important the agency assess and disclose the full range of applicable scientific research. Proposed management actions must be supported with analysis disclosures of substantiating science AND disclosures of scientific controversy or nonsupport. Accurate site-specific conditions, cumulative impacts analysis, and disclosures and assessments of the proposed projects impacts upon species of concern must be presented in the NEPA analysis document. The project

must base its planned actions on credible scientific recommendations towards protecting, restoring and maintaining the long-term ecological integrity and functioning of the area's forest ecosystems, ensuring the project meets the biodiversity, habitat, and viability requirements of native species of concern.

Common conservation ground can best be achieved when proposed actions are based upon credible ecologically non-controversial science research restoration recommendations; avoiding actions that could result in significant harms to natural forest ecology and biodiversity. Proposed actions should not exceed those scientifically necessary and capable of achieving legitimate ecological purpose and need goals. Removal of mature, old, and inherently fire resistant trees; unnatural logging removal or excessive manipulation of established forest structure; excessive thinning in ponderosa pine stand; logging-thinning in mixed conifer mixed-fire severity forest; use of heavy logging machinery; new, "temporary," and other road construction would adversely impact forest ecology, biodiversity, vegetation, soils, wildlife, avian, botanical & other species of concern populations and habitat; resulting in further degradation of the ecological integrity, wildlife habitat, soil hydrology, and natural systems in and around the project area.

Similar with other projects in the region, project provisions need to include:

A. Providing for the retention of all trees with old and mature characteristics regardless of size, projected longevity, or condition;
B. Diameter limits of 14" to a maximum of 16" dbh above which no trees may be cut;
C. Strategically place actions located near private lands edge areas, existing roads, and already degraded areas, focusing on restoration of natural processes and structure;
D. Interior forest stands should be ecologically maintained allowing natural cyclic processes, conditions, and functioning. Management actions should be designed to maintain and augment, rather than hinder, natural processes, and to provide for the viability and habitat needs of dependent forest species;
E. Protecting soils and native plants by limited machinery use and requiring low impact light machinery and practices in all areas where machinery is employed;
F. Protecting RHCAs and localized moist 'riparian' areas where these may seasonally occur, by prohibiting machinery use and logging in these locations;
G. No commercial logging actions or tree removal in aspen and cottonwood stands;
H. Seasonal restrictions on project implementation protecting avian species during nesting and fledging periods;
I. No new roads of any kind may be built. Road reconstruction may not occur on naturally reclaimed non-navigable roads. Road density levels must be reduced throughout the project area, both in localized units and overall. Density levels may not be artificially diluted by averaging these with the inclusion of unroaded or entire project analysis area acres;
J. No logging-thinning actions or machinery use may occur in unroaded or ecologically significant areas;
K. Livestock grazing must be suspended for one year pre-project implementation and between 5 to 10 years post project from all affected action areas;
L. Other provisions as ecologically appropriate.

The notice proposes a series of varied scientifically insupportable logging-'thinning' actions, rationalized by natural forest ecological components of fire/fuels, insects, and disease. Such actions have generally proven to be far more harm than benefit, varying in degree of harms dependent upon the extent of thinning employed and the location and timing of thinning actions.

Management actions work best when they are kept within the parameters of greater scientific consensus rather than controversy. Care must be taken limiting thinning to scientifically supported actions and locations. Project actions must ensure sufficient trees and forest stand structure remain to provide for the diverse optimum habitat needs of dependent wildlife species, and to provide for both localized and landscape scale forest ecological integrity. Management actions that excessively thin forests can be

antithetical to project goals of reduced risk of severe fires and enhancing forest ecological resiliency. Excessive logging-thinning actions increase and exacerbate the risk of severe fires, as fire resistant mature and old trees are soon replaced with fire-prone brush and small diameter trees. Soils disturbed and impaired by heavy logging machinery cannot support the healthy subsurface soil microbial communities and hydrological functioning necessary to maintain healthy trees and forests. Existing populations of invasive plants can be further spread, and new introductions of exotic invasive plants may occur as a result of soil disturbing logging-thinning actions.

Limiting thinning to only smaller diameter trees, employing variable diameter thinning limits as appropriate to PAG site-specific conditions, has more scientific and ecological support. For example, limiting felling to trees <12" dbh, or a range of variable diameter limits specific to frequent fire PAGs from 10" to 14" dbh (16" dbh at most), is less scientifically controversial and more ecologically capable of achieving project purpose and need goals.

We look forward to reviewing the draft EIS (recommended) or EA for this proposed project. The NEPA analysis must disclose and assess:

- Old growth forest areas size and location;
- Listed species, focal species, indicator species, and species of concern in, transiting, and adjacent to the project area;
- Landscape scale and localized wildlife connectivity, including migration, foraging, and dispersal habitat and routes;
- Soil conditions, and soil microbial community qualities and impacts;
- Existing invasive plant population and location concerns, and invasive exotic plant introduction and spread issues;
- Ecosystem and soil hydrological patterns, seasonal moist riparian areas and flows, salmonid and other watersystems, 303(d) listed areas, and any affected aquatic species;
- Excessive road density issues, including plans to remove excess roads and bring the area into compliance with Forest Plan road density standards and wildlife thresholds. No new or temporary roads should be proposed;
- Inventoried and uninventoried roadless areas, and/or areas of significant ecological resource value or concern in or nearby the project area, including connective habitat within or along the project;
- ORV use and issues in and adjacent to the project area;
- The full range of applicable scientific research pertinent to the proposed project, including that which may substantiate proposed actions and that which recommends against such actions or addresses issues of scientific controversy;
- Natural fire cycles, patterns, and conditions that historically occurred in this area, fire occurrence in the area during the past 100 or more years, and recent current fire and management history;
- Natural cyclic changes in forest extent, fire patterns, and dependent species;
- Cumulative impacts for past, present, and future projects in and adjacent to the proposed project area, including livestock grazing, OHVs, other thinning-logging actions, burning, recreational projects, private lands projects and actions, and all other known or foreseeable actions;
- Issues of carbon sequestration and climate change, and project impacts affecting soils (which store the greatest banks of carbon and loose much of this when disturbed by logging), and forest structure and integrity (again logging significantly reduces carbon sequestration, contributing incrementally to exponentially growing climate change);
- Other pertinent information as environmentally, scientifically, and legally appropriate.

Conclusions Regarding Jane

We appreciate the opportunity to comment, and the previous efforts of the agency, Oregon Solutions, and the Southern Blues Partnership in bringing the Jane Project proposal to the public scoping period. As NEPA analysis begins, it is imperative that we honor the analysis requirements and intention in developing a scientifically founded and ecologically beneficial project with meaningful public involvement. This especially important as the quality, scientific foundation, legal compliance, and implementation results of this project will help pioneer the potential for future projects in this region. It is towards these ends that we respectfully submit our comments and conservation concerns. To help identify additional conservation concerns, we herein reference the substantial ecological, science, and legal concerns and issues already provided to the agency planning staff and decision-makers in our previous comments (and/or appeals & objections as applicable) on the Damon, Knox, Thorn, Crawford, Canyon, Dads Creek, Egley, and other Malheur NF logging and/or fuels reduction-thinning styled projects.

Additionally, we recommend assessing and disclosing the actual implantation impacts and results of similarly premised projects, including the Canyon Creek, 16 Road, Dads Creek, Knox, and Balance projects. The actual impacts and results of these prior projects can help refine this similarly premised project's actions with greater awareness of its likely impacts and restoration objective effectiveness. We look forward to discussing these and related conservation concerns with agency decision-makers and planning staff soon.

For our natural 'wild' forests,

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Quotations, however, eloquent or inspiring, cannot compare to a day spent free amidst the wonders of wild nature.