Statement of Andy Kerr, Senior Counselor to Oregon Wild before the Subcommittee on Public Lands and Forests of the Energy and Natural Resources Committee of the United States Senate on the Proposed Oregon Eastside Forests Restoration, Old Growth Protection and Jobs Act (S.2895, 111th Congress), March 10, 2010

I come from the wilderness movement. As a public lands conservationist, nothing is more satisfying to achieve one's conservation goals than when Congress draws a line around an area and says this piece of the public's land is so special and sacred that it shall be managed primarily by leaving it alone for the benefit of this and future generations.

I still have one foot firmly planted in the wilderness movement; there are plenty of worthy roadless areas on the eastside forests of Oregon that ought to be in the National Wilderness Preservation System. However, more of the eastside forests of Oregon are not pristine and are, in fact, sick and wounded.

Humans have already caused them great harm from livestock, chainsaws, bulldozers and Smokey Bear mythology. Many of Oregon's eastside dry forests are in bad shape.

Best Available Science

My other foot is planted firmly in the best available science. The general consensus of the best available science for dry ponderosa pine and dry mixed-conifer forests on the eastside of Oregon is that much of the forest of these types is in need of active restoration—ecological restoration that includes not only the careful reintroduction of fire to these fire-dependent forests, but often the judicious use of a chainsaw and the removal of ecologically problematic trees.[1]

Not only have bulldozers, chainsaws, bovines and flame-retardants screwed up these forests, human-caused climate disruption that is further stressing these already stressed forests. This additional stressor all the more requires the application of the best available science to restore these forests, including the removal of site-specific stressors.

When the Facts Change Consider Changing Your Mind

When the facts change—be they ecological, economic or political facts—it is appropriate to at least consider changing one's mind. This historic legislation that has brought together historic enemies is possible because the facts have changed. My goals for eastside forests haven't changed, but my strategies and tactics have changed in light of the facts. Consider these changes:

1. *Less logging and less old-growth logging.* During the height of the timber wars in the late 1980s and early 1990s, there were approximately 30 wood products mills in eastern Oregon cutting nothing much else but old-growth trees. Today, there are about five still running and cutting little—but still too much—old growth.[2]

2. *Increased scientific consensus on the need for active management to achieve ecological restoration.* The best available science is clear and convincing that unhealthy dry forests can benefit from prescribed fire and careful and constrained restoration thinning to restore them to ecological health.[3]

3. *A matured conservation community.* The conservation movement is diversifying from a historic focus centered on the preservation of pristine natural landscapes to also being equally concerned about the restoration of degraded natural landscapes.

4. The timber industry on the eastside of Oregon is no longer a monolith. The timber companies that remain are of two species:

(A) *Sylvanus adaptus* adapted to changed conditions and recognize that they've lost their social license to log old growth and in roadless areas; and

(B) *Sylvanus horribilis* survived so far by not changing one damn bit. Pure stubbornness and resistance to change have served *S. horribilis* well enough until now, but they are just dead men walking.

S. adaptus is the one that can help the Forest Service conserve and restore degraded dry forests, while at the same time profiting for themselves and prospering for their communities.

I will work as hard to keep this new timber industry alive to restore Oregon's eastside dry forests as I have worked and will work for the old timber industry to die before it cuts the last of the old trees.[4]

What the role of the eastern Oregon timber industry should be after needed ecological restoration period (approximately three-decades) is a question that need not be answered—or even debated—now.

The End of the Timber Wars for the Eastside of Oregon

Enactment of this legislation can mark the end of the timber wars for the eastside forests of Oregon. When fully implemented, the new statute can result in the comprehensive conservation and restoration of forests and watersheds on over eight million acres of National Forest System lands.

In addition to new management goals that emphasize natural structure, process and functions over the historic emphasis on timber production, this new law can also result in more timber going to the mills than in recent times.

These logs will be from trees that are ecologically problematic—smaller trees that have grown in during the past century and a half of livestock grazing, high-grade logging and fire exclusion in dry forest types and that are threatening the little remaining old-growth ponderosa pine and other species.

In the isn't-life-ironic department, the best available science tells conservationists that we need a right-sized timber industry to aid in the conservation and restoration of forests and watersheds. Conservationists also need a relevant and working Forest Service to be in service to forests.

Enactment of this legislation will result in new rules of engagement for national forest stakeholders. Confrontation can give way to collaboration. Walking and talking in the woods can become more prevalent that litigating and arguing in the courts.

I am still a happy warrior when it comes to logging natural young, mature and old-growth moist forests types, or to conserving the greater sage grouse and the Sagebrush Sea, to prohibiting energy development off the Oregon Coast, or other matters.

However, the times for and the politics of eastside dry forests of Oregon have changed and all these changes require the conservation community and the timber industry to reinvent themselves. Senator Ron Wyden's introduction of this path-breaking legislation is an important milestone in those efforts.

As we humans continue and increase our messing with Mother Earth, the response of the conservation community must be to diversify to complement our preservation paradigm with a restoration paradigm.

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Converting Ecologically Problematic Small Trees Into Commercially Valuable Logs

The amount of old-growth ponderosa pine forests in eastern Oregon today is but 2-8% of what it was before the European invasion.[5] The result is unnatural concentrations of fire-susceptible younger and smaller trees that are outcompeting the residual old-growth ponderosa pine trees for moisture and nutrients—leaving old-growth trees more likely to suffer premature death due to insects and disease. [6] An additional—but somewhat overblown—concern is that these encroaching trees can also serve as a ready fuel-ladder to carry otherwise beneficial low-severity surface fires into the residual old-growth forest canopy, resulting in the loss of rare old-growth ponderosa pine. Unnaturally dense stands are less suitable habitat for white-headed woodpeckers and other wildlife,[7] as well as a variety of understory plants.[8]

The Problems the Legislation Will Address

By "eastside forests" in Oregon, I mean approximately 8.3 million acres of National Forest System lands *not* within the range of the northern spotted owl and covered by the Northwest Forest Plan. These forests range from ponderosa pine at the lowest elevations at the edge of the Sagebrush Sea to alpine parklands above timberline. In between one can find western larch, western white pine, mountain Douglas-fir, whitebark pine, western juniper, white fir, grand fir, subalpine fir, Engelmann spruce, incense cedar, quaking aspen, black cottonwood, limber pine, mountain hemlock, lodgepole pine and other tree species.

Ponderosa pine-dominated forests outside of designated Wilderness and Inventoried Roadless Areas are found on 4.6 million acres of the lands covered by this legislation.[9] It is only the *dry* forest types of Oregon's eastside that are generally unhealthy. For a century and a half, natural and beneficial frequent low-severity surface fires have been interrupted due to domestic livestock grazing, which removes the grass that carried these fires. For well over a century, these forests have been high-graded for their wood by removing the largest and most naturally fire-resistant trees for timber. For well over a half-century, the fire-industrial complex has effectively deprived these forests of vital fire. From the standpoint of both habitat and hydrology, road densities are extreme.

The evidence and effects of fire exclusion are obvious. The harm to these forests is chronic, ongoing and severe.

Passive Versus Active Restoration

It is reasonable to ask if the best course is to simply withdraw human-caused site-specific ecological irritants and let nature heal itself. Passive restoration is what I always prefer philosophically and in many cases it is the right ecological course of action. However, a general scientific consensus exists that says that—either on a tree, stand and/or landscape basis—active management is necessary to ecologically conserve and restore ponderosa pine-dominated forests on the eastside of Oregon.

The absence of further interventions by humans to correct previous interventions will likely—according to most scientists—result in the loss of the remaining dry old-growth forests and the species that depend upon these endangered ecosystems.

The best available science tells us that careful and constrained ecological restoration thinning will heal, not further harm, dry forests.

To Thin or Not to Thin—Before To Always Burn

In dry ponderosa pine-dominated forests of eastern Oregon, the reintroduction of fire into these fire-dependent ecosystems is always necessary. Wildfire is either the continuation of the present forest or the birth of the next one. Merely thinning a dry forest—without also reintroducing fire—will not achieve ecological restoration.[10]

In many cases restoration goals in fire-dependent forest types can be met with only the careful reintroduction of prescribed fire. However, there are many other cases where the careful and constrained scientifically based restoration thinning is necessary or desirable.

In these other cases, the presence of "ladder" fuels (younger trees in the understory that can carry otherwise beneficial surface fires into the residual old-growth overstory) makes for an unacceptable risk to the relatively few remaining old-growth ponderosa pine trees.[11] Though the risk of loss to wildfire of old-growth ponderosa pine trees in a particular stand is relatively low, the introduction of prescribed fire before restoration thinning can—in many but not all cases—result in unacceptable risk of old-growth tree loss.

It is very important to conserve the remaining old-growth ponderosa pine trees in Oregon, as perhaps only one-twelfth to one-fiftieth remains. Today, the number and extent of such trees are so perilously low that extraordinary measures are necessary to conserve them. As more old growth is again found on the landscape it will be both desirable and possible to leave these forests to the vagaries of wildfire.

Because of this severe shortage of live old-growth ponderosa pine across the landscape, it's important to make extraordinary efforts to conserve these habitats until such time that fire can again be expressed naturally across the landscape. While the conversion to a standing dead tree from a standing live tree is not a "loss" to nature per se—but rather just a change—given there are not enough live old-growth trees means that special care needs to be taken. There are not enough dead old-growth trees either, but live trees will turn into dead trees in time.

There is also the matter of scale. Restoration of dry forest types across eastern Oregon needs to be done on a very large scale. It is not feasible to solely rely on either prescribed or wild fire to achieve these ends. First, the wild fires may not be adequate in scale. Second, the acceptable level of prescribed burning is limited to appropriate weather windows and available staffing. Third, fire is an imprecise tool to surgically excise ecologically problematic small trees while saving ecologically vital live old trees.

Invoking the Best Available Science Rather Than the Worst Possible Politics

Besides the statutory protection for large trees and streams, limitations on roads and changes in management goals for the eastside forests of Oregon, perhaps the most important concept of this legislation is that Congress would be establishing a process to conserve and restore the forests and watersheds of the eastside forests of Oregon. This process is based on strong protections and clear directions from Congress to the Forest Service and is to be guided by the best available science.

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Unlike other bills pending in Congress to address forest health issues on federal lands in the American West, what distinguishes this legislation is that it does not presuppose specific ends or means to achieve them. Rather than declaring all bugs bad, all diseases disastrous and all fires fatal—as a matter of legislated fact—the legislation rather sets broad goals for the management of forests that most can agree with and leaves it to the Forest Service to manage consistent with the best available science to achieve those goals.

This is Compromise Legislation, Not Comprehensive Legislation

The legislation fails to address many aspects of national forest management and use that I believe Congress should address. In many instances, I would have preferred more explicit direction and protection. However, a critical mass does not exist for my wishes to prevail.

An important missing element in the legislation is the provision of federal tax credits to leverage industry investment in state-of-the-art logging, yarding, hauling and milling equipment that reduces soil impacts and energy consumption, while at the same time making those ecologically problematic, generally smaller trees into more generally economically valuable logs.

A major challenge to implementing this legislation will be securing adequate funding. Society owes an ecological debt to these forests that Congress must honor. The best source of funds to pay down this ecological debt—by undertaking the necessary comprehensive forest and watershed restoration—is to reprogram current Forest Service annual appropriations that now go to a fire-industrial complex that wastes billions of dollars attempting to extinguish fires that cannot or should not be extinguished. Reprogramming this money to ecological restoration and to private landowner incentives to make their dwellings resistant to fire is a much better use of taxpayer funds.

Conservation Community Not of One Mind Regarding Restoration Thinning

The conservation community is not of one mind when it comes to ecological restoration thinning of dry forest types. While a large critical mass of the conservation community is in support of careful and constrained ecological restoration thinning—as part of a comprehensive forest and watershed restoration strategy that also includes the removal of unnecessary roads and the improvement of necessary roads, limitations on livestock grazing, efforts to limit invasive species, and the careful reintroduction of fire into these fire-dependent forests—some environmentalists are not.

Their objections can be categorized as scientific, philosophical and esthetic.

Scientific. The science on how best to manage dry forest types is not unequivocal. Science never is totally settled. However, the vast majority of the relevant science concludes that careful and constrained ecological restoration thinning broadly applied across the landscape helps to restore these forest types to ecological health. Unfortunately, some of my colleagues who disagree with this scientific consensus are inclined to selectively interpret selected sources to support their viewpoint. I am troubled that some of my conservation colleagues embrace the best available science that says leave moist forest types alone, yet ignore the best available science for dry forest types that says careful and constrained thinning is necessary for their ecological restoration.

Philosophical. Like most of my colleagues, I believe that federal public lands should provide goods and services to society that the private sector is unwilling or unable to provide. I do not believe that logging (or mining or grazing for that matter) merely for commercial purposes is a legitimate use of public lands. However, in the case of eastside dry forest types, the removal of ecologically problematic trees by converting them to commercially valuable logs is a coincidental convergence of ecological and economic interests that I can support. Timber production as a byproduct of ecological restoration is an economic opportunity, a social good and an ecological necessity. Of course, it's easier when the best available science coincides with one's philosophy, esthetic sense, re-election or self-interest.

Esthetic. Part of the objection that that part conservation community has to ecological restoration thinning is esthetic. Logging—even that done well—with all its stumps, usually looks like hell. When I visit a dry forest that recently has been subjected to ecological restoration thinning, I think of visiting my father after his triple bypass. He was in intensive care and he was so cut up and bruised that it looked like the old man had been beaten to within an inch of his life. Yet afterwards, he was the better for the surgery that had a purpose and the desired effect. Aldo Leopold said, "One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen."[12]

Burden of Proof and Standard of Evidence: Upon Whom and How Much?

Most conservationists and many governments give great weight to the precautionary principle. Wikipedia says: "The precautionary principle states that if an action or policy has suspected risk of causing harm to the public or to the environment, in the absence of a scientific consensus that harm would not ensue, the burden of proof falls on those who would advocate taking the action." [13]

Always in ecological preservation and often in ecological restoration, the best course is to do nothing—just leave an area or an ecosystem alone (while stopping degrading activities). However, in the case of these dry eastside forests degraded from past management, doing nothing is doing something. Doing nothing—most of the evidence suggests—will cause these forests to remain unhealthy, if not irreversibly converting to a new ecological state that is not desirable for wildlife, watersheds or re-creation.

The differences among conservationists come down to both who should bear the burden of proof and what should be the standard of evidence. Yes, there is not 100% agreement among the best available scientists as to the best available science. In determining either civil liability or criminal guilt, American law has developed three distinct standards:

• *Preponderance of the Evidence***.** "[T]he matter asserted seem more likely true than not."

• *Clear and Convincing Evidence***.** "[I]t is substantially more likely than not that the thing is in fact true."

• *Beyond a Reasonable Doubt***.** "[C]lose to certain of the truth of the matter asserted."[14]

The fundamental question is whether restoration thinning will help degraded dry forest types to live or help them to die. To deprive one of life or liberty, the criminal standard is "beyond a reasonable doubt" ("beyond a shadow of a doubt" is not a legal standard). If the evidence in support of ecological restoration thinning in dry forest types turns out to be true, then to not thin will be to condemn these forests. If such evidence is incorrect, then to thin will

similarly condemn such forests. In either case, the consequences of being wrong argue against requiring the highest standard of evidence to determine a course of action (or inaction).

Yet, having the "preponderance of the evidence" seems like too low of a standard of evidence to determine the ecological truth. Merely being barely more likely than not to choose the correct course is not something to bet the forest on.

Therefore, we are left with "clear and convincing evidence" as an appropriate standard of evidence, as it requires that the evidence be substantially more likely than not to turn out to be true.

An insurmountable problem is that standards of evidence are usually applied after the fact. If the alleged fact that occurred previously is true, one goes to jail or pays a judgment. In the case of dry forest types, society must consider evidence not on what *has* happened, but what *will* happen if a particular course of action is taken or not taken. At best, society must choose the best-reasoned prediction in the hope of avoiding the worst reasonably anticipated outcome.

In the case of degraded dry forest types, doing nothing does not ensure that nothing will happen. If only the precautionary principle had been applied long before now.

Hedging Against Both Ignorance and Arrogance

Scientific consensus does not mean scientific unanimity. There are still scientists who argue there is no link between tobacco and cancer or carbon dioxide and climate disruption. However, if nine out ten doctors tell me I have cancer, it is prudent of me to believe them and to follow a course of action that most of them agree on.

While today's best available science that says that careful and constrained—but widespread—thinning of dry forest types on the eastside of Oregon is the best course of action, such may not be the case in the future. The existing scientific consensus may either grow stronger or turn out to be wrong. To mitigate this risk of wrong prediction it is prudent for society to hedge against the risks of both ignorance and arrogance.

Today, the best available science says careful and constrained restoration thinning of much of these degraded dry forests is necessary to return them to ecological health. However, we should no more thin every acre than not thin any acre of dry forest types in eastern Oregon. Perhaps one-half should be thinned, while perhaps one-half should not be thinned. In this way, if the best available science of today turns out to be correct, we will have done well for the forest on a landscape scale. If the best available science of today turns out to be wrong, at least we won't have made the entire landscape worse.

Conclusion

In sum, the proposed Oregon Eastside Forests Restoration, Old Growth Protection and Jobs Act is not the bill I would have written. It is the product of what Senator Wyden could convince a critical mass of the conservation community and timber industry to agree on. While not a perfect bill, it is nonetheless a great bill. It would provide for new and better goals for national forest management and can result in the conservation and restoration of old-growth forests and watersheds for the eastside forests of Oregon—benefiting clean water, fish and

wildlife; helping to mitigate the effects of climate change; and leaving them in a healthier state for future generations to enjoy.

Andy Kerr (andykerr@andykerr.net) of The Larch Company (www.andykerr.net) serves as Senior Counselor to Oregon Wild, the organization best known for having brought you the northern spotted owl. He is also a consultant to several other conservation organizations. He began his conservation career during the Ford Administration and has been involved in the enactment of over 30 pieces of state and federal legislation, numerous listing of species under the Endangered Species Act, scores of lawsuits and countless administrative appeals of timber sales. At the peak of the Pacific Northwest timber wars, THE OREGONIAN'S NORTHWEST MAGAZINE characterized him as the timber industry's "most hated man in Oregon." The LAKE COUNTY EXAMINER called Kerr "Oregon's version of the Anti-Christ." That was then; this is now.

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Supplemental Statement from Oregon Wild

For the last two decades, Oregon Wild has struggled over the question of how best to defend old-growth forests and important watersheds in eastern Oregon from logging, road building, and other destructive activities, while at the same time promoting needed restoration on degraded lands. We believe there is a need for both.

Oregon Wild has long sought to protect the last remaining old-growth forests in eastern Oregon, and we have used the existing regulations that protect large trees and riparian and aquatic resources to do this. We also understand that Oregon's eastside forests have been altered drastically by more than a century of fire suppression, livestock grazing, road building and industrial logging. Past management has left eastside landscapes in desperate need of restoration, which begins with conserving intact watersheds, remaining mature and old-growth forests, and habitat for at-risk fish and wildlife

Oregon Wild supports this legislation because it expands upon existing protections for large trees and aquatic resources. These protections are important to us. But the bill also directs the Forest Service to use the best available science to restore forest and watershed health as its primary goal. We believe this is equally important.

Beginning with the lush forests of the Siuslaw National Forest more than a decade ago, conservation, industry, and community interests have begun to come together to seek common ground on managing our public lands around the concept of restoration. This has led to broad agreement on the treatment of thousands of acres of previously harvested forests that benefit the restoration of old-growth habitat, and the restoration of many miles of salmon habitat.

In the drier forests of eastern Oregon, this shift has been happening as well. Tim Lillebo has been working for Oregon Wild to help design and implement forest management projects that advance ecological restoration in the Deschutes, Ochoco and Malheur National Forests for more than two decades. In particular, he is currently working with the Sisters Ranger District to get the Glaze Forest Restoration Project implemented, and to facilitate a broad collaborative effort to engage the community in designing what might have been a highly controversial project within an old-growth pine forest. That project can hopefully serve as a model for collaboration and for prescriptions that benefit wildlife and forest health.

Senator Wyden's Oregon Eastside Forests Restoration, Old Growth Protection and Jobs Act represents a compromise. It is not perfect, but based on our experience working in eastern Oregon for three decades, we believe that it makes significant improvements in forest management that will yield real benefits for water quality, fish and wildlife, healthy forest structure and function, and help prepare for and mitigate the effects of climate change. It will also support the trust and common ground that has begun to be built between the US Forest Service and its stakeholders.

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[1] *For more on my views on this subject, see*: Kerr, Andy. 2006. Thinning Certain Oregon Forests to Restore Ecological Function. Ashland, OR: The Larch Company (http://andykerr.net/Downloads)

[2] Shelk, John. Managing Director, Ochoco Lumber Company. Personal Communication. 28 December 2009.

[3] *See* Noss, R. F., J. F. Franklin, W. L. Baker, T. Schoennagel, P. B. Moyle. 2006. Managing fire-prone forests in the western United States. Frontiers in Ecology and the Environment 4(9): 481-487. (Ecological Society of America. Washington, D.C.). With the permission of the lead author, this paper is available for download for limited educational purposes only at www.andykerr.net/downloads. *And* Brown, Richard T., James K. Agee and Jerry F. Franklin. 2004. Forest Restoration and Fire: Principles in Context of Place. Conservation Biology 18:903-912.

[4] *For more of my views on how the timber industry has changed and society's views of forests are continuing to change, see*: Kerr, Andy. 2008. "Starting the Fight and Finishing the Job," Page 129-138 in *Spies*, Thomas A and Sally L. Duncan (eds). *Old Growth in a New World: A Pacific Northwest Icon Reexamined*. Island Press. Washington, DC.

[5] Noss, Reed F., Edward T. Laree, J. Michael Scott. 1995. Endangered Ecosystems of the United States: A Preliminary Assessment of Loss and Degradation. Biological Report 28. USDI-National Biological Service. Washington, DC: (unpaginated) (citations omitted) (available at biology.usgs.gov/pubs/ecosys.htm).) Comparable losses have occurred on the Ochoco, Malheur, Umatilla and Wallowa-Whitman National Forests.

[6] Brown, R. 2000. Thinning, Fire and Forest Restoration: A Science-Based Approach for National Forests in the Interior West. Defenders of Wildlife. Portland, OR. 40 pp. Available at http://www.defenders.org/resources/publications/programs_and_policy/biodiversity_partners/thinning,_fire_and_forest_restoration.pdf

[7] Johnson, D. H., and T. A. O'Neil, editors. 2001. Wildlife-habitat relationships in Oregon and Washington. Oregon State University Press, Corvallis, Oregon, USA.

[8] Dodson, Erich Kyle; Peterson, David W.; Harrod, Richy J. 2008. Understory vegetation response to thinning and burning restoration treatments in dry conifer forests of the eastern Cascades, USA. Forest Ecology and Management. 255: 3130-3140.

[9] Fernandez, Erik. F. Oregon Wild. Personal Communication September 2009.

[10] Brown, R. 2000. Thinning, Fire and Forest Restoration: A Science-Based Approach for National Forests in the Interior West. Defenders of Wildlife. Portland, OR. 40 pp. Available at http://www.defenders.org/resources/publications/programs_and_policy/biodiversity_partners/thinning,_fire_and_forest_restoration.pdf

[11] Brown, Richard T., James K. Agee and Jerry F. Franklin. 2004. Forest Restoration and Fire: Principles in Context of Place. Conservation Biology 18:903-912.

[12] Leopold, Aldo., Luna Bergere Leopold, and Charles W. Schwartz. 1991. Round River: From the |Journals of Aldo Leopold. Page 165.

[13] http://en.wikipedia.org/wiki/Precautionary_principle; accessed on 30 December 2009

[14] http://en.wikipedia.org/wiki/Burden_of_proof