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Testimony Regarding Suggested Changes to S. 2593,

The Forest Landscape Restoration Act of 2008

To: The US Senate Committee on Energy and Natural Resources

The Western Institute for Study of the Environment supports S.2593 if the attached modifications are incorporated (see attached). This testimony explains and justifies the suggested modifications.

Introduction

We recognize the pressing need to undertake immediate actions to protect and restore our National Forests across the West.

Americans are losing our public forests to catastrophic fires at an alarming rate. Very large or megafires are causing billions of dollars worth of losses each year, as well as devastating threatened wildlife populations, irreplaceable wildlife habitat, and watershed values. Old-growth trees are being killed by the millions of acres each year by historically unprecedented large-scale, high-severity fires fueled by thickets of younger trees and brush.

Megafires are also escaping from Federal land, burning rural and urban homes. Fire suppression costs, resource losses, and damages to public and private property have soared.

We believe the solution to these problems lies in restoring forests and other landscape types to historically-informed, ecologically healthy, sustainable conditions.

Restoration forestry can be defined as silviculture, prepared fire, wildlife population management, and other aggressive, active management actions that recreate open, park-like forests, savannas, and meadows at their historically-accurate geographic locations within our National Forests.

Only through restoration forestry can we protect, maintain, and perpetuate our old-growth forests, heritage meadows, and other historical features.

The Problem Set

- National Forests across the West are at extreme risk from catastrophic fire.

Within the last seven years western states have suffered the largest fires in modern history. Yet fire hazards continue to increase with each passing year, as new growth adds to burgeoning fuel loads. Catastrophic fire acreage, fire suppression costs, losses, and damages to fires are at record levels and still climbing.

- The fires of the past 15 years have decimated old-growth stands, wildlife habitat, wildlife populations, watershed values, recreation opportunities, scenery, and more.

Catastrophic fires, such as the 500,000 acre Biscuit Fire (2002) destroy old-growth habitat and have been implicated in the continuing decline of northern spotted owls and other Threatened and Endangered species populations -- plant and animal, vertebrate and invertebrate – across the West (USFWS, 2007).

- Catastrophic fires often convert old-growth forest stands to brush

The historical development pathways for many (if not most) of our forests involved frequent light fires, not stand-replacing fire. Modern fires that kill all or most of the trees leave no seed source. The results are not new forests, but instead brush fields that will burn again after 15 to 50 years of new fuel development.

- Fires that start in untended, fuel-laden federal forests occasionally escape beyond federal property lines.

In recent years, unprecedented megafires originating federal lands have escaped control efforts and spread onto private property outside National Forest boundaries. Thousands of homes are lost to escaped federal fires each year. Urban as well as rural homes are burned. This year San Diego was visited again by megafires, repeating their experiences of 2003. Los Alamos was severely burned in 2000. Sedona, South Lake Tahoe, Ketchum, Bend, and dozens of other cities and towns across the West have been endangered by disastrous fires that began on unrestored, fuel-laden National Forests.

- In addition to inviting extreme, ecosystem-altering fires, overly dense stands are more prone to insect infestations and fungal epidemics.

This is not simply an issue of fuels and fire; the density of young-growth trees in our forests produce a high potential for drought stress and related insect outbreaks. Surviving old-growth trees are now at high risk of death to both insects and fungi as a result of drought stress from competition.(Johnson and Franklin, 2007)

If federal policies continue on the present course, many more millions of acres of heritage, old-growth forests and the habitat they provide to important wildlife species will be destroyed, not to return for generations, if ever. More watersheds will be incinerated. Private homes and property will be lost each year to escaped federal fires. Fire suppression costs and resource losses will continue to skyrocket.

Solutions to this crisis are desperately needed.

The Solution Set

We support the landscape-scale ecological restoration treatments called for by S. 2593, the Forest Landscape Restoration Act of 2008.The current problems mentioned above arise because forest and landscape conditions on our National Forests are far removed from (outside the range of) historical and sustainable conditions. Restoration to historical and sustainable conditions is the solution.

Restoration must be informed by history. To restore means to return to original condition. Restoration cannot be accomplished unless the original, or at least historical, conditions are known and understood. We quote Dr. Thomas M. Bonnicksen, author of America's Ancient Forests:

> The goal of restoration forestry is to restore and sustain, to the extent practical, a forest to a condition that resembles, but does not attempt to duplicate, the structure and function of a reference historic forest. The term "reference historic forest" means the way a whole forest appeared spreading over a landscape, with all of its diversity, at or about the time it was first seen by European explorers. A reference historic forest does not represent a particular point in time. It represents a period and the variations in forest structure that characterized that period. (Bonnicksen 2005)

.Historical analyses based on pioneer journals, oral histories, and empirical investigations of stand age structures provide strong evidence that most forests in the West were open and park-like in prior centuries. Frequent, regular, seasonal fires maintained trees at wide spacing, overtopping grassy understories that provided abundant forage for game species as well as seasonal food sources for Indian gatherers (Pyne, 1997; Bonnicksen, 2000; Stewart, 2002; Blackburn and Anderson, 2003; and many others).

Historically, fires in such stands were not stand-replacing. Instead, regular patterns of seasonal anthropogenic fires gave rise to conditions that allowed trees to grow to great ages. Without frequent fires, (that is, with infrequent fires) trees do not grow very old. Infrequent fires are stand-replacing. The actual historical development pathways for many (if not most) of our old-growth forests involved regular, frequent, seasonal fires, not stand-replacing fire (Tappeiner et al., 1997; Poage, 200; Covington, 2002; Fulé et al., 2006, and many others).

Historical analyses also provide strong evidence that most of the regular, frequent, seasonal fires of the past that sustained old-growth forests were anthropogenic (human-set). Indian burning for a variety of subsistence purposes gave rise to and maintained open, park-like forest structures, large and small prairies, savannas of oak, pine, and fir, berry fields, and other vegetation types sustained in our landscapes for millennia. In the absence of Indian burning, or modern equivalents thereof, our forest structures and landscape vegetation conditions have deviated from historically sustainable conditions. (Boyd, 1999; Zybach, 2003, Anderson, 2005; and many others).

Wildfire in dense forests does not replicate historic anthropogenic fire, and therefore cannot replicate historic forests in the future. Modern dense forests, with fuel loadings much greater than historic levels, must be prepared to accept fire without total tree mortality. We need more than "fuels management," however.

Our public lands require restoration forestry treatments that recreate open, park-like forests, savannas, and meadows at their historically-accurate geographic locations within our National Forests.

The benefits of restoration forestry include:

- Prevention of catastrophic megafires (and reduction in emergency fire suppression costs and fire losses)
- Prevention of large-scale CO2 emissions from wildfires
- Prevention of ecosystem conversion to fire-type brush and other chronically severe fire hazard conditions
- Prevention of catastrophic fire damage to watersheds
- Preservation of historic features of our shared, cultural landscapes
- Sustaining old-growth trees and old-growth development pathways
- Sustaining wildlife habitat, and listed species
- Reinvigoration of rural economies, jobs, and local school funding

We believe one-half to two-thirds (at least) of our public forests require restoration forestry to protect, maintain, and perpetuate old-growth forests.

We quote Drs. K. Norman Johnson and Jerry F. Franklin, Testimony to the US Senate Subcommittee on Public Lands and Forests of the Senate Committee on Energy and Natural

Resources, Hearing regarding forest restoration and hazardous fuels reduction efforts in the forests of Oregon and Washington, held Thursday, December 13, 2007:

> Restoration programs must be planned and implemented at the landscape scale to be effective; management over the last century has altered entire landscapes and created the potential for very large wildfires and insect outbreaks. Treating isolated stands within these landscapes will not be effective...
>
> To conserve these forests, we need to modify stand structure (e.g., treat fuels) on one-half to two-thirds of the landscape…
>
> Activities at the stand level need to focus on restoring ecosystems to sustainable composition and structure--not simply to acceptable fuel levels. Objectives of these treatments need to include: retention of existing old-growth tree populations; shifting stand densities, basal areas, diameter distributions, and proportions of drought- and fire-tolerant species (e.g., ponderosa pine and western larch) toward historical levels... Finally, restoring old-growth tree populations to, and maintaining them at, historical levels should be a goal of restoration management. (Johnson and Franklin, 2007).

Historically and ecologically, human beings administered the key partial disturbances that maintained sustainable forests: frequent, regular, seasonal, human-set fire. Human stewardship of the land was an important component in the development of our old-growth stands. We need human stewardship again, to protect and restore our priceless, heritage, American forests and landscapes.

Specific Line-by-line Recommendations

To achieve ecological restoration on a landscape scale, we believe S. 2593 must include some additional language that provides for natural/cultural historical analyses of our federal landscapes. Without such analyses, inadequate knowledge and understanding of specific landscape histories will thwart the goal of restoration.

We have crafted the necessary additional language; a modified Forest Landscape Restoration Act of 2008 is attached. The following comments refer to the pages and line numbers in the modified version. Red type is the new language; yellow indicates is original language to be replaced.

Page 2, lines 1-14. A restatement of the goals to add clarity to the Act

Page 2, lines 19-31. Additional necessary definitions for the terms ecological restoration, historical ecological development pathways, and historical reference conditions.

Page 3. lines 1-20. Additional necessary definitions for the terms Northwest Forest Plan, old-growth trees, and priority forest landscapes.

Page3, line 23 through Page 4, line 19. Providing for a process to investigate, analyze, and report on the forest and landscape histories of likely priority forest landscapes.

Page 5, lines 5-6, and various other lines throughout. Allowing the full-range of ecological restoration treatments without regard for the diameter of trees removed. Diameter limits preclude or impede ecological restoration and thus thwart the goals of the Act.

Page 5, lines 7-13. Prohibiting the removal of old-growth trees.

Page 5, line 14. Allowing restoration treatments in old-growth forest stands, which are the most at-risk, contain the most resource values, and are thus most in need of ecological restoration.

Page 5, lines 20-21. Prohibiting the use of wildfire as an ecological restoration treatment.

Page 6, lines 1-15. Ensuring that ecological restoration treatments meet the goals of the Act.

Page 7, lines 1-4. Ensuring that ecological restoration treatments are efficient and effective.

Page 7, lines 5-7, and various other lines throughout. Ensuring that proper analysis and accounting is made of the costs, resource losses, and ecological damages caused by wildfires.

Page 8. lines 7-9. Ensuring that collaborative forest landscape restoration projects comply with the National Environmental Policy Act.

Page 9, lines 11-13. Raising limits on the number of collaborative forest landscape restoration projects allowed. At least 5,000,000 acres per year should be ecologically restored over the next 20 years.

Page 11, lines 7-8. Ensuring 5that adequate funding is provided to accomplish the goals of the Act

Page 11, lines 11-19. Providing a work plan for the creation of natural/cultural historical analyses.

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