16 March 2010

Dear President Obama and Members of Congress:

As scientists conducting research in the fields of forest and fire ecology, we feel compelled to provide input to Congress when proposed legislation does not accurately represent the current state of scientific knowledge. Some current bills, including the "Oregon Eastside Forests Restoration, Old Growth Protection, and Jobs Act of 2009" (the "Act"), sponsored by Senator Ron Wyden (D-OR), propose measures to increase logging levels on national forests based upon the assumptions that the current levels and intensities of wildland fire and beetle mortality in these forests are "uncharacteristic", are harmful to the forest ecosystems, and increased logging will reduce the extent or intensity of these natural processes. Because these assumptions are not based upon a sound scientific foundation, and because of the concern that these bills include annual logging-level mandates that might undermine existing environmental laws, we urge you not to support such proposals as currently written. Ecological considerations should guide what we do on our national forests, rather than setting logging targets independently of ecological considerations.

Below, we briefly outline some important current scientific information that should be reflected in any Act dealing with forests of eastern Oregon or elsewhere in the western United States:

- There is currently a significant deficit of large snags (dead trees) in Oregon's forests relative to the minimum habitat needs of many native cavity-nesting wildlife species, especially in eastern Oregon (Donnegan et al. 2008). This Forest Service report, based upon thousands of field plots, concluded that large (over 20 inches in diameter) snags are "currently uncommon" in eastern Oregon, at only 1 per acre presently, and determined that "management may be necessary to produce a greater density of large snags" (Donnegan et al. 2008 [pp. 47-48]).
- Fire and insect-mortality are probably the most effective natural processes for providing the snags and large wood that are currently in deficit in these forests.
- Where snag densities are relatively higher, these areas do not tend to burn at higher severities (Bond et al. 2009).
- The scientific data contradicts the assumptions that, prior to fire suppression, wildland fire in eastern Oregon's forests burned only at low-intensity levels and patches of high-intensity fire are somehow "uncharacteristic" or unnatural. We now know that forests of the intermountain west, including ponderosa pine forests, have burned at various severities historically, and high-severity fire is a natural part of this mix (Pierce et al. 2004, Sherriff and Veblen 2006, Baker et al. 2007, Hessburg et al. 2007, Sherriff and Veblen 2007, Klenner et al. 2008, Whitlock et al. 2008, Baker 2009).
- In the eastern Cascades, high-severity fire occurrence is very low, with a current (since 1985) rotation interval of 889 years, i.e., at current rates, high-severity fire will only affect a given stand every 889 years—well beyond the normal lifespan of the conifer species (Hanson et al. 2009, Hanson et al. 2010). Moreover, fires are not getting more intense in eastside forests (Hanson et al. 2009, Hanson et al. 2010), and overall fire

occurrence is far below is historic extent (Medler 2006). It is also apparent that recent levels of fire occurrence make it highly unlikely that fuel treatments could affect fire behavior even in the forest types that tend to burn most frequently (Rhodes and Baker 2008). There is no good evidence that current high-severity fire in eastern Oregon exceeds the natural range of variability.

- Fuel treatments do not always reduce fire severity in the relatively rare cases when fire affects treated areas.
- Fuel treatments are not effective in maximizing carbon storage relative to fire alone (Mitchell et al. 2009).
- Fire has numerous ecological benefits, even when it is high severity. Patches of high-severity create the forest and montane chaparral habitats that are some of the most ecologically important, highly biodiverse, and rarest forest habitat in our western U.S. forests (Hutto 2006, Noss et al. 2006, Swanson et al. 2010). Many rare and imperiled wildlife species native to eastern Oregon, such as the Black-backed Woodpecker, depend upon unlogged patches of high-severity fire for nesting and foraging (Hutto 1995, Hutto 2006, Hanson and North 2008, Hutto 2008, Swanson et al. 2010). High-severity fires also provide a bonanza downed wood which benefits aquatic systems (Beschta et al. 2004, Karr et al. 2004, Swanson et al. 2010).
- Fuel treatments in many widespread forest types are likely to be ineffective in restoring natural fire behavior (Veblen 2003; Schoennagel et al. 2004; Noss et al. 2006; Baker et al. 2007).
- The Act's diameter limit of 21 inches is excessive, and allows far too many mature, old trees to be removed unnecessarily.
- Extensive logging typically involves road activities, including the construction of "temporary" roads and landings which have negative impacts on watersheds and aquatic systems. The negative watershed impacts of so-called "temporary" landings and roads are not temporary, but persistent (Beschta et al. 2004, Karr et al. 2004).
- Many imperiled fish species depend on habitats that are affected by land use on public lands in Oregon (USFS and USBLM 1997). Many of these habitats are already widely degraded (Henjum et al. 1994). Additional degradation from extensive logging, elevated use and/or construction of roads and landings is likely to further imperil these fish species and increase the likelihood of extirpation.
- Remaining roadless areas are critical to biodiversity and larger roadless areas typically have the lowest potential for altered fire regimes, especially due to their location at higher elevations (Henjum et al. 1994). Such areas should be protected from logging.

Due to the foregoing, we urge that any legislation aimed at restoring forests on public lands include the following:

- Explicit statements that all activities must fully comply with existing environmental laws.
- Retention of citizen review provisions. As stated in Karr et al. (2004): "Managing public lands for the benefit of present and future generations is challenging -- a process most likely to succeed in an open atmosphere that actively uses existing scientific and technical information and expertise."
- Restrict fuel treatments only to areas where multiple lines of empirical evidence clearly indicate that the fire regimes have been altered and that there is currently more high-severity fire than there was prior to fire suppression. In such areas, limit thinning to

small-diameter trees beneath the forest canopy. Ensure that treatments do not occur in systems where fire regimes have not been altered.

- Prohibit construction of new landings and roads. Require significant levels of permanent road decommissioning and closure prior to any fuel treatments.
- Retain all mature trees, including those that pre-date settlement (Baker et al. 2007).
- Significantly curtail fire suppression in areas where human infrastructure is not at risk. Curtail domestic livestock grazing in areas where it has contributed to fire regime alteration.
- Exclude treatments from roadless areas greater than 1,000 acres. These areas are scarce, biologically important, and serve as important controls for monitoring effectiveness of any fuel treatments.
- Require sound scientific analysis and disclosure of the potential ecological costs and benefits of fuel treatments, prior to initiating treatments.

We are happy to answer any questions about these issues. Please feel free to contact us.

Sincerely,

Chad Hanson, Ph.D.
Director and Staff Ecologist, John Muir Project (email: cthanson1@gmail.com)
Research Associate, Plant & Environmental Sciences Department, University of California at Davis

Dennis Odion, Ph.D. (Ashland, OR), Institute for Computational Earth Systems Science, University of California at Santa Barbara

Jonathan J. Rhodes, M.S., Hydrologist, Planeto Azul Hydrology, Portland, OR

Richard Hutto, Ph.D., Professor and Director
Avian Science Center, University of Montana

James Karr, Ph.D., Professor Emeritus
University of Washington

Monica Bond, M.S., Ornithologist

Derek Lee, M.S., Mammalogist

Peter Moyle, Ph.D.
Center for Watershed Sciences, University of California at Davis

Thomas Veblen, Ph.D., Director, Biogeography Lab
Department of Geography, University of Colorado, Boulder

Philip Rundel, Ph.D., Distinguished Professor of Biology
University of California at Los Angeles

Shaye Wolf, Ph.D., Ecologist, Center for Biological Diversity

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