

July 3, 2002

Subcommittee on Forests & Forest Health
1337 Longworth House Office Building
U.S. House of Representatives
Washington, D.C. 20515-6205
(202) 225-0691
fax (202) 225-0521
e-mail: Forest.Health@mail.house.gov
<http://resourcescommittee.house.gov/forests>

Dear Chairman McInnis and Members of the Committee:

Several years ago, we contributed to a report titled “Wildfire and Salvage Logging, Recommendations for Ecologically Sound Post-Fire Salvage Management and Other Post-Fire Treatments” (Beschta et al., 1995), commonly referred to as the “Beschta Report.” Our report was embraced by diverse groups inside and outside the US Forest Service (USFS), including a number of courts, because of its rigorous scientific foundations and the effort we made to translate the results of a rich history of scientific and technical research into specific management and policy guidelines.

Oddly, recent testimony by the current Chief of the USFS before the Subcommittee on Forests & Forest Health on June 12, 2002 and a June 2002 USFS report titled “The Process Predicament: How Statutory, Regulatory, and Administrative Factors Affect National Forest Management” indicts the Beschta Report as “questionable.” Those challenges seem to hinge on the fact that the report has not been published in a peer-reviewed journal and the assertion by unspecified USFS staff that the report contains “unsubstantiated statements and assumptions.” We note that this claim of scientific errors committed in the Beschta Report has never been backed up with specific documentation by citation of specific USFS or other documents, peer-reviewed or not.

There is a simple reason why the Beschta Report stands up to scrutiny in the courts. It is reasonable, concisely stated, and is a robust and accurate interpretation of science and management experience. Despite numerous attempts, its scientific integrity has not been successfully undermined in a court of law.

We would welcome an opportunity to present testimony to the committee to provide our perspective on the Chief’s claims. To provide an early response for the record, we send this letter as a written response to the Chief’s testimony and the comments contained in the “Process Predicament Report.” We are compelled to do so, because in our view, Dale Bosworth, in his role as Chief of the USFS, misrepresented our work and its effect on USFS activities in his testimony before you on 12 June 2002.

#1. Contrary to the Chief’s wholly unsubstantiated statement that our report is “questionable,” our work is supported by a rich history of scholarly work by scientists inside and outside the USFS. We cited more than a dozen such publications in our report. Our goal in the report was to provide limited scientific citations so as not to overwhelm the people and institutions that we expected might use our report. We summarized briefly the wealth of scientific information and peer-reviewed publications on the effects of logging and other post-fire activities on forests,

soils, watersheds, water quality, and fish. The intervening seven years has seen an explosion of additional work both inside the USFS and elsewhere, virtually all of it concordant with our conclusions and recommendations. Equally important, the members of the Beschta Panel were selected because of the breadth and depth of their scholarly experience, their expertise in diverse relevant fields including forest soils, watershed hydrology, water quality, forest management, landscape ecology, aquatic ecology, fish ecology, conservation biology, and ecological restoration. We are not aware of any papers published in the peer-reviewed scientific literature, before or after the 1995 publication of the report, that negate or substantially contradict our conclusions and recommendations. If the Chief knows of any peer-reviewed publications that he feels contradict our report, we would welcome the opportunity to review these and incorporate them in an updated revision of the report.

#2. Chief Bosworth should be aware that the USFS itself has repeatedly conceded that our March 1995 report had, and still has, scientific merit. In August 1995, Dr. Richard Everett of the USFS Pacific Northwest Research Station prepared a response to the Beschta Report titled “Review of Recommendations for Post-Fire Management” (“Everett Report”) in a letter to the Regional Forester of Region 6 (Oregon and Washington). The Everett Report concurred with key aspects of our report, including our conclusion that there were no data to indicate that post-fire salvage logging reduced the risk of reburn. To wit, the Everett Report (p. 4) stated: “[t]here is no support in the scientific literature that the probability for reburn is greater in post-fire tree retention areas than in salvage logged sites.” The Everett Report (p. 4) also concludes that the Beschta Report was “... correct that the intense reburn concept is not reported in the literature.” The Everett Report (p. 5) also states that current research suggests that salvage logged areas may have elevated fire hazard over unlogged sites for the first twenty years after logging. The Everett Report (p. 6) concludes, “[t]he urgency to remove woody biomass is not based on reducing short-term fire hazard, but on the capture of economic values and reduction of long-term fire hazard.”

In 2000, the USFS’s Pacific Northwest Research Station published a literature review of fire and salvage logging effects, titled “Environmental Effects of Postfire Logging: Literature Review and Annotated Bibliography” (McIver and Starr, 2000). Among other things, McIver and Starr (p. 19, 2000) “...found no studies documenting a reduction in fire intensity in a stand that had previously burned and then been logged.” This is precisely the conclusion we made in our 1995 report.

Our 1995 report concluded that the effects of logging are typically more persistent and ecologically damaging than fire. This is corroborated in the conclusions in the USFS’s 1997 regional assessment of Columbia River basin conditions, “The Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volumes I-IV.” (PNW-GTR-405, USFS, Walla Walla, Washington; USFS and USBLM, 1997a). This 1997 assessment also concluded that an effective way to restore damaged forest soils is to leave areas undisturbed until recovery has occurred (USFS and USBLM, p. 206, 1997a). It concludes (p. 206) that prevention of soil damage is far more effective than attempting restoration after damage has occurred. USFS and USBLM (p. 206, 1997a) also concluded that logging negatively affects soil and forest productivity, while burning these materials in place causes significantly less negative impacts. Notably, all of these conclusions are in our 1995 report.

Although they are not peer-reviewed, USFS environmental impact statements (EIS) have also concurred with our conclusions. As just one example, the USFS’s 1997 Draft EIS for the Interior Columbia Basin Ecosystem Management Project states (Ch. 4, p. 13): “[b]ecause of the mosaic pattern that wildfire produces, and the residual wood that is left on site...wildfire usually has fewer

implications for loss of soil productivity and function than disturbances which remove soil organic matter and decrease (*sic*) bulk density as well." It also states that although fire can affect soil productivity and hydrologic properties, the effects of logging on these soil properties are usually more severe and more persistent than fire (USFS and USBLM, Chap. 4, pp. 12-13, 1997b). Again, these are the precise conclusions we communicated in our 1995 report.

The USFS officially recognized the importance of our 1995 report for post-fire projects. In July 1995, in a Memo from Regional Forester J. Lowe to Forest Supervisors and Directors, titled "Analysis of Fire Recovery Projects," the USFS Regional Forester for Region 6 (Oregon and Washington) directed Forest Supervisors to require that our report be considered with NEPA documentation for site-specific projects. The memo states (p. 1), "[c]learly this information needs to be considered in ongoing analysis . . . For each project or group of similar projects, review the Beschta paper (along with other information sources) to determine applicability given site-specific conditions and issues in the project area." While emphasizing the need to assess the principles of the Beschta Report on a case-by-case basis, the Everett Report (p. 1) commended our 1995 report for identifying potential problems associated with post-fire salvage logging.

#3. The Chief's testimony incorrectly asserts that our 1995 report was not peer-reviewed . Our 1995 report was peer-reviewed, prior to issuance, by other scientists with expertise in fire ecology, including Dr. J. B. Kauffman, a Professor of Riparian Ecology at Oregon State University in Corvallis, OR. Further, in March 1995, more than 50 scientists with expertise in biology, fisheries, wildlife, ecology, and geology endorsed our report in an open letter to President Clinton, with our report attached. It is worth noting that typically three or fewer peer-reviewers review most papers published in scholarly scientific journals.

The Chief is correct in noting that our 1995 report has not been published in a peer-reviewed technical journal. At the time of our publication, we decided to forego presenting our conclusions and recommendations in a form suitable for a technical journal for two reasons. First, we felt that it was crucial to rapidly inject sound science into the discourse regarding post-fire salvage practices, which at the time were damaging a wide variety of natural resources. Sadly, this concern continues to be germane today.

Second, we decided to issue a concise and policy relevant document in a form understandable to a wide audience, including citizens, agency personnel, and scientists, rather than issue a report full of the often ponderous language of technical papers published in peer-reviewed journals with their limited, but specialized audience. We stand by that decision given the management context at the time and that sadly persists today. Clearly, peer-reviewed publication is still timely, as is underscored by Chief Bosworth's testimony; accordingly we are taking steps to pursue publication in a scholarly journal.

#4. The Chief's assertion that EISs must address work of "questionable" scientific merit that has not been peer-reviewed is amusing, and self-contradictory. USFS EISs are not normally subjected to peer-review by scientists outside of the agency. Further, USFS EISs often come to conclusions, or are used to support decisions, that directly contradict the vast body of scientific evidence and information. The USFS publishes reams of information annually that has not undergone any peer review by scientists external to the agency. So, if the Chief wishes to apply a single yardstick, he should point out that the bulk of his agency's assessments are scientifically questionable, using the standard he applies to external reports.

#5. Finally, we emphatically note that our report is not responsible for the USFS's avowed inability to address some of the very real and pressing issues affecting public lands, our natural resource heritage. Rather, the agency often strives to ignore or deny the vast body of knowledge that has accumulated in recent decades in favor of antiquated policies. For example, extensive and detailed studies (mostly conducted by the agency's own scientists) demonstrate that the smallest diameter fuels present the highest risk for fire while the largest diameter trees are critically important to retain crucial ecological functions in forested landscapes. Yet, the USFS continues to attempt to implement post-fire salvage logging that focuses on the removal of the largest diameter fuels. Similarly, it is indisputable that roads are one of the greatest threats to the ecological integrity of forested systems and associated river, wetland, lake, and coastal ecosystems. Yet, the USFS has failed to adopt a policy that mandates reversing the worst ecological effects of roads, or that precludes incursion of roads into roadless areas. Despite widespread recognition of these facts, the USFS diverts staff and money to extraordinarily costly salvage logging projects at the expense of reducing the extent of the road network or undertaking needed fine-fuels reductions in unburned forests.

This is not just a recipe for controversy, it is also a recipe for the continued deterioration of forested landscapes, and of living systems that are sustained by and sustain those forests. Humans are a key part of those landscapes. Humans, too, suffer when these resources are degraded, as will often happen if the forest practices advocated by the Chief and "The Process Predicament" report are continued. Continued denial of the extensive body of technical and scientific evidence that formed the foundation of our report will guarantee continuation of the downward spiral of forest-associated resources.

We appreciate the opportunity to provide these perspectives on our work and its relevance to pressing natural resource dilemmas. We stand ready to provide more information on these issues as needed. Since we write as co-authors and scientists, we include our current work affiliations for identification and communication purposes only.

Sincerely,

James R. Karr, Professor of Aquatic Sciences and Zoology
Adjunct Professor of Civil Engineering, Environmental Health, and Public Affairs
Telephone: (206) 685-4784
FAX: (206) 528-0885
Office: 222A Fishery Sciences
Mail address: University of Washington, Box 355020, Seattle, WA 98195-5020
e-mail: jrkarr@u.washington.edu

Dr. Christopher Frissell
Senior Staff Scientist
The Pacific Rivers Council
PMB 219, 1 2nd Avenue E., Suite C
Polson, MT 59860 USA
Phone 406-883-1503
FAX 406-883-1504
e-mail: hanfris@digisys.net

Jonathan J. Rhodes
Forest Hydrologist/Western Native Trout Campaign
<http://www.westerntrout.org/trout/>
Center for Biological Diversity
PO Box 710
Tucson AZ 85702-0710
Phone: 503.236.2207
jrhodes@biologicaldiversity.org
<http://www.biologicaldiversity.org/>

Robert L. Beschta
Professor Emeritus of Forest Hydrology
Telephone: (541) 737-4952
FAX: (541) 737-4316
Mail address: College of Forestry, Oregon State University, Corvallis, OR 97331
e-mail: Robert.Beschta@orst.edu

David L. Perry
Professor Emeritus,
Oregon State University
Corvallis, OR
Affiliate Professor
University of Hawaii
Hilo, HA

G. Wayne Minshall
Idaho State University,
Pocatello, ID

Literature Cited:

Beschta, R. L., Frissell, C. A., Gresswell, R., Hauer, R., Karr, J. R., Minshall, G. W., Perry, D. A., and Rhodes, J. J. 1995. Wildfire and Salvage Logging, Recommendations for Ecologically Sound Post-Fire Salvage Management and Other Post-Fire Treatments.

McIver, J.D. and Starr, L. (tech. eds.). 2000. Environmental Effects of Postfire Logging: Literature Review and Annotated Bibliography. PNW-GTR-486. USFS, Pac. NW Research Station, Portland, OR.

USFS and USBLM. 1997a. The Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volumes I-IV. PNW-GTR-405, USFS, Walla Walla, WA.

USFS and USBLM. 1997b. The DEIS for the "Eastside" Planning Area. USFS, Walla Walla, WA.