Attachment D

Opposing Views Attachment #1

Respected Scientists Reveal the Certainty that Natural Resources in the Forest are Harmed (and some destroyed) by Timber Harvest Activities

Note to the Responsible Official who reads these opposing views: There are negative effects caused by nearly all actions … this includes the actions necessary to harvest trees. The public deserves to consider projects proposed to occur on their land with the knowledge of the pros and cons of the project.

The Responsible Official will find that none of the literature sources for the opposing views below is specific to this project. Information contained in books and/or scientific prediction literature is never specific to individual projects. They describe cause and effects relationships that exist when certain criteria are met … at any location under the vast majority of landscape characteristics.

Indeed, the literature in the References section of the draft NEPA document for this project is not specific to the project yet it was used to help design this project. There are laws against deceiving the public by withholding the information describing the adverse effects of proposed projects so the line-officer might carry out the agency's timber agenda.

I'll point out these laws in my appeal if the final NEPA document does not cite some of the source literature for the opposing views below. To do this the source literature must be included in the References section of the final NEPA document.

Introduction

The following statements describe the natural resources that most likely will sustain damage as a result of timber harvest activities. The majority of the statement are authored or signed by Ph.D. biological scientists.

Timber Harvest Opposing View #1 - The following document contains pertinent color pictures showing logging damage, thus the article text is not shown here. Please use the link below to access the article.

Al-jabber, Jabber M. "**Habitat Fragmentation:: Effects and Implications"**
Clearcuts and forest fragmentation, Willamette NF, Oregon.
From: Cascadia Wildland Project, Spring 2003
http://faculty.ksu.edu.sa/a/Documents/Habitat%20Fragmentation%20Effects%20and%20Implication.pdf

Timber Harvest Opposing View #2 - "Timber harvest operations have been shown to have many effects on adjacent watercourses and on the aquatic ecosystems they support. This may occur from introductions or loss of woody debris, loss of riparian vegetation, accelerated stream bank and bed erosion, the alteration of natural channel form and process, and the reduction of stream habitat diversity. However, the existing literature indicates one of the most insidious effects of logging is the elevation of sediment loads and increased sedimentation within the drainage basin.

Sediment generation from various forestry practices has been studied extensively in the past. Forestry practices which generate suspended sediments include all operations that disturb soil surfaces such as site preparations, clear-cutting, log skidding, yarding, slash burns, heavy equipment operation and road construction and maintenance."

Anderson, P.G. 1996. "**Sediment generation from forestry**

operations and associated effects on aquatic ecosystems"
Proceedings of the Forest-Fish Conference: Land Management Practices Affecting Aquatic Ecosystems, May 1-4, 1996, Calgary, Alberta.
http://www.alliance-pipeline.com/contentfiles/45____Sediment_generation.pdf

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Timber Harvest Opposing View #3 - "Timber harvest will remove dead and dying material from the site and inhibit the recruitment of downed woody material as time progresses. Timber harvest and associated reduced structural complexity and reduced age and size class diversity are all known to reduce population abundance and diversity of ants and a number of birds. For instance, ants are documented to require downed woody material in a variety of sizes and in all stages of decomposition (*Torgersen and Bull*, 1995). This is an attribute that is negatively correlated with harvest of the dead and dying trees and positively correlated with natural succession, especially after disturbance. Ants and birds are known to predate on insect species which cause mortality to trees, serving as a potentially important population control in the case of epidemics or before they occur (*Campbell, Torgersen and Srivastava*, 1983). Structural and functional characteristics associated with unlogged forests are also important for canopy arthropods, which play an important role in regulating pest outbreaks (*Schowalter*, 1989).

Structural complexity, functional diversity, diversity of ecological process and diversity of structure in roadless areas are all expected to be less susceptible to the outbreak of pests and regulate insect activity in surrounding homogenized forests (*Schowalter and Means*, 1989; *Franklin, Perry, Schowalter, Harmon, McKee and Spies*, 1989).

A large body of scientific evidence also indicates that increased edge effect and increased sunlight into stands, resulting from reduced canopy cover associated with timber harvest, can directly promote the population abundance, productivity and persistence of insects which cause mortality to

trees of (*Roland*, 1993; *Rothman and Roland*, 1998; *Kouki, McCullough and Marshall*, 1997; *Bellinger, Ravlin and McManus*, 1989)."

"**Applying Ecological Principles to Management of the U.S. National Forests**"
Issues in Ecology Number 6 Spring 2000
http://www.esa.org/science_resources/issues/FileEnglish/issue6.pdf

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Timber Harvest Opposing View #4 - "The biggest ecological con job in years is being waged by the U.S. Republican party and their timber industry cronies. They are blaming the recent Western wildfires on environmentalists, and assuring the public that commercial logging will reduce the risk of catastrophic wildfires."

Barry, Glen, Ph.D. "**Commercial Logging Caused Wildfires**"
Published by the *Portland Independent Media Center*, August 2002.
http://portland.indymedia.org/en/2002/08/17464.shtml

Timber Harvest Opposing View #5 - "According to a 1998 poll by a firm that has worked for several Republican House members and two presidents, 69 percent of Americans oppose commercial logging on federally owned land. The Forests Service's own poll showed that 59 percent of Americans who expressed an opinion oppose timber sales and other commodity production in national forests."

"Many Americans are surprised to learn that logging is even allowed on public lands. Alas, it has been since the Organic Act of 1897 first authorized logging in America's new forest reserves. That legislation called

for watershed protection and a steady supply of timber - what the Forest Service calls ‘multiple use.’ "

“But the agency has been unable to balance those goals. More often than not, the integrity of the forest ecosystem has been sacrificed to maximize timber and other commodities. And at taxpayer expense, notes Bernie Zaleha, chair of the End Commercial Logging on Federal Lands (ECL) campaign. The Forest Service lost $2 billion on its logging program from 1992 to 1997, according to the General Accounting Office. It spends more on building roads and preparing sales than it gets back in timber receipts.”

Barry, John Byrne. “**Stop the Logging, Start the Restoration**”
from *The Planet* newsletter
June 1999, Volume 6, Number 5
http://www.sierraclub.org/planet/199905/ecl1.asp

Timber Harvest Opposing View #6 - “Federal auditors have found that the Forest Service frequently fails to assess, prevent or correct environmental damage from logging on the national forests.

After inspecting 12 timber projects in the field from 1995 to 1998, the Agriculture Department's inspector general found that all were deficient and that ’immediate corrective action is needed.’

A new report on the audits found that the environmental studies required before logging was approved were poorly done, the rules to protect streams and wildlife habitat from undue damage during logging were not followed, and the steps planned to repair some of the harm after logging were not carried out.

The inspector general, Roger C. Viadero, reported on Jan. 15 to Mike Dombeck, chief of the Forest Service, that the review had found ''numerous serious deficiencies.'' Agency officials generally agreed with the report's conclusions and recommendations."

Cushman, John H. Jr. "**Audit Faults Forest Service on Logging Damage in U.S. Forests**" *New York Times*, February 5, 1999
http://query.nytimes.com/gst/fullpage.html?res=9B00E2DF163BF936A35751C0A96F958260&sec=&spon=&pagewanted=print

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Timber Harvest Opposing View #7 - "The timber harvest shouldn't be dominant. It should be on an equal plane with recreation concerns, with wildlife concerns, hunting, fishing, protecting our cultural heritage. That's what the American public is asking us to do."

Dombeck, Mike Ph.D. **"Through the Woods"**
The News Hour with Jim Lehrer. 19 June 1998.
http://www.pbs.org/newshour/bb/fedagencies/jan-june98/road_6-19.html

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Timber Harvest Opposing View #8 - "I recently read a letter from a line officer who chided local managers for being behind schedule relative to meeting the region's 'timber targets.' My expectation is that line officers will demand similar accountability for meeting watershed restoration, fish and wildlife habitat, riparian, recreation, cultural resource, and wilderness management goals."

“We need to do a better job talking about, and managing for, the values that are so important to so many people. Values such as wilderness and roadless areas, clean water, protection of rare species, old growth forests, naturalness -- these are the reasons most Americans cherish their public lands.”

"Fifty years ago, Aldo Leopold wrote his seminal work, *A Sand County Almanac*. In it, Leopold spoke of his personal land ethic and the need for land managers to extend their own ecological conscience to resource decisions. The Forest Service natural resource agenda is an expression of our agency's land ethic. If we are to redeem our role as conservation leaders, it is not enough to be loyal to the Forest Service organization. First and foremost, we must be loyal to our land ethic. In fifty years, we will not be remembered for the resources we developed; we will be thanked for those we maintained and restored for future generations."

Dombeck, Mike Ph.D.
a message on "Conservation Leadership” sent to all USFS employees on July 1, 1998
http://www.wvhighlands.org/VoicePast/VoiceAug98/Dombeck.Aug98.html

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Timber Harvest Opposing View #9 - “For much of the past century the Forest Service, entrusted as the institutional steward of our National Forests, focused its management on an industrial-scale logging program. The result of the massive logging and road construction program was to damage watersheds, destroy wildlife habitat and imperil plant and animal species.”

“The continued logging of our National Forests also wastes American tax dollars and diminishes the possibilities of future economic benefits. The Forest Service lost $2 billion dollars on the commercial logging program between 1992-1997. Annually, timber produces roughly $4 billion while recreation, fish and wildlife, clean water, and unroaded areas provide a combined total of $224 billion to the American economy. Forests purify our

drinking water - 60 million Americans get their drinking water from National Forests. When the dramatic values of ecological goods and services are taken into account, it is clear that protecting National Forests creates more economic benefits than continued logging."

Ehrlich, Anne Ph.D., David Foster Ph.D. and Peter Raven Ph.D. 2002
"**Call to End Logging Based on Conservation Biology**." *Native Forest Network*.
http://www.nativeforest.org/campaigns/public_lands/stb_5_30_02.htm

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Timber Harvest Opposing View #10 - "The Bush administration has announced plans to greatly increase logging on federal lands in order to reduce the risk of wildfires. The Forest Service is using the fear of wildfires to allow logging companies to remove medium-and large-diameter trees that they can sell, rather than just the small trees and brush that can make fires more severe. There is little evidence to show that such logging will prevent catastrophic fires; on the contrary, logging roads and industrial logging cause wildfires. Bush is a well known supporter of the timber industry and has accepted huge sums of money from wealthy timber company leaders. He is promoting misinformation about forest fires in order to benefit timber industry campaign contributors."

"**Bush Fire Policy: Clearing Forests So They Do Not Burn**"
FOREST CONSERVATION NEWS TODAY, August 27, 2002
http://forests.org/archived_site/today/recent/2002/tiporefl.htm

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Timber Harvest Opposing View #11 - "The proposition that forest values are protected with more, rather than less logging, and that forest reserves

are not only unnecessary, but undesirable, has great appeal to many with a vested interest in maximizing timber harvest. These ideas are particularly attractive to institutions and individuals whose incomes depend upon a forest land base. (page 2)"

"On the other hand, approaches that involve reserving of a portion of the land base, or harvest practices that leave commercially valuable trees uncut to achieve ecological goals, are often considered much less desirable as they reduce traditional sources of timber income. (page 2)"

Franklin, Jerry Ph.D., David Perry Ph.D., Reed Noss Ph.D., David Montgomery Ph.D. and Christopher Frissell Ph.D. 2000. **"Simplified Forest Management to Achieve Watershed and Forest Health: A Critique."**

http://www.coastrange.org/documents/forestreport.pdf

Timber Harvest Opposing View #12 - "Consequently, we specifically criticize the "simplified structure-based management" approaches derived from simple structural models and traditional silvicultural systems such as clearcutting. In our view, the assumptions underpinning simplified structure-based management (SSBM) are not supported by the published scientific literature on structural development of natural forests, disturbance ecology, landscape ecology and conservation biology, or by the relationships between ecosystem structures and processes. In this report, we review scientific findings associated with each of these areas with particular attention to the over-simplified structural models associated with SSBM and the importance and viability of forest reserves to achieve various ecological goals. (page 2)

"We do not believe, however, that scientific literature or forestry experience supports the notions that intensively managed forests can duplicate the role of natural forests, or that sufficient knowledge and ability exist to create even an approximation of a natural
old-growth forest stand." (page 3)

Franklin, Jerry F. Ph.D. and James K. Agee Ph.D.
2007. "**Forging a Science-Based National Forest Fire Policy.**"
Issues in Science and Technology.
A National Wildlife Federation publication sponsored by the Bullitt Foundation
http://www.coastrange.org/documents/forestreport.pdf

Timber Harvest Opposing View #13 - "But the majority of the protesters were angry about Bush's plans to implement rules that would thin our national forests to reduce fire risk. Cascadia Forest Alliance volunteer Carrie Taylor said Bush's plan to log mature and old forests "will only increase fire risks while providing taxpayer subsidized logs to the timber industry."

"According to the Cascadia Forest Alliance, under the Bush proposal, 'environmental laws and citizen involvement will be undermined or suspended so that federal land management agencies can increase logging and roadbuilding on public lands, one of the timber industry's highest priorities.'"

Giuliano, Jackie Alan, Ph.D. "**Fire Suppression Bush Style: Cut Down the Trees!**" *Environmental News Service*, 2008.
http://www.ens-newswire.com/ens/aug2002/2002-08-23g.asp

Timber Harvest Opposing View #14 - "Most of the trees that need to be removed to reduce accumulated fuels are small in diameter and have little or no commercial value."

"Mechanically removing fuels (through commercial timber harvesting and other means) can also have adverse effects on wildlife habitat and water quality in many areas. Officials told GAO that, because of these effects, a large-scale expansion of commercial timber harvesting alone for removing materials would not be feasible. However, because the Forest Service relies on the timber program for funding many of its activities, including reducing fuels, it has often used this program to address the wildfire problem. The difficulty with such an approach, however, is that the lands with commercially valuable timber are often not those with the greatest wildfire hazards."

Government Accounting Office
"**Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats**"
GAO/RCED-99-65
http://www.gao.gov/archive/1999/rc99065.pdf

Timber Harvest Opposing View #15 - "The recent concern over the poor health of western pine ecosystems has been attributed at least partly to inappropriate silvicultural practices, both before and since the national forests were established. (4) Because of the timber industry's needs, logging in mixed conifer stands has emphasized cutting the large pines and leaving the true firs and Douglas-fir to dominate the remaining stands. (5) However, true firs and Douglas-fir are more susceptible to the damage (including insect and disease attacks as well as direct damage) that has occurred during the decade-long drought in the interior West, and thus may contribute to the risk of catastrophic wildfires. Salvage sales are one tool that can be used to improve forest health, (6) but critics object to granting the agency the discretion to use timber sales to correct problems partially created by past timber sales."

"A more general concern in some quarters is over Forest Service "bias" toward timber outputs, at the expense of ecosystem conditions and other

resource values. While timber harvests are important, other important values are not measured, and managers are not rewarded for achieving these other values. (7) Some have attributed this "bias" to inappropriate incentives, particularly related to the agency's numerous trust funds and special accounts. (8) The Forest Service has several trust funds and special accounts that are either funded by timber revenues or provide funds for timber management (or both). (9)"

"One trust fund often cited by critics is the Knutson-Vandenberg (K-V) Fund. This account receives an unlimited portion of timber sale receipts, to be used for reforestation, timber stand improvements, and other resource mitigation and enhancement activities in timber sale areas. Forest Service managers can, therefore, fund their programs from timber sales; in the words of one critic, wildlife managers have an incentive to support timber sales that damage wildlife habitat, because they can use the revenues to mitigate that damage and to keep themselves and their staffs employed. (10)"

Gorte, Ross W. Ph.D. "**Forest Service Timber Sale Practices and Procedures: Analysis of Alternative Systems**." A Congressional Research Service (CRS) report, October 30, 1995.
http://www.ncseonline.org/NLE/CRS/abstract.cfm?NLEid=215

Timber Harvest Opposing View #16 - "In April 1999, the General Accounting Office issued a report that raised serious questions about the use of timber sales as a tool of fire management. It noted that "most of the trees that need to be removed to reduce accumulated fuels are small in diameter" -- the very trees that have 'little or no commercial value.' "

"As it offers timber for sale to loggers, the Forest Service tends to 'focus on areas with high-value commercial timber rather than on areas with high fire hazards,' the report said. Its sales include 'more large, commercially

valuable trees' than are necessary to reduce the so-called accumulated fuels (in other words, the trees that are most likely to burn in a forest fire)."

"The truth is that timber sales are causing catastrophic wildfires on national forests, not alleviating them. The Sierra Nevada Ecosystem Project Report, issued in 1996 by the federal government, found that 'timber harvest, through its effects on forest structure, local microclimate and fuel accumulation, has increased fire severity more than any other recent human activity.' The reason goes back to the same conflict that the G.A.O. found: loggers want the big trees, not the little ones that act as fuel in forest fires."

"After a 'thinning' timber sale, a forest has far fewer of the large trees, which are naturally fire-resistant because of their thick bark; indeed, many of these trees are centuries old and have already survived many fires. Without them, there is less shade. The forest is drier and hotter, making the remaining, smaller trees more susceptible to burning. After logging, forests also have accumulations of flammable debris known as "slash piles" -- unsalable branches and limbs left by logging crews."

Hanson, Chad Ph.D., "**Commercial Logging Doesn't Prevent Catastrophic Fires, It Causes Them**." Published in the *New York Times*, May 19, 2000
http://www.commondreams.org/views/051900-101.htm

Timber Harvest Opposing View #17 - "The Forest Service keeps the vast majority of timber sale revenues, which gives it a perverse incentive to do more cutting. It has developed a huge bureaucracy around the selling of timber from national forest land."

Hanson, Chad, Ph.D. "**Logging for Dollars in National Forests**"
Special to *The Sacramento Bee* - November 14, 2001
http://www.johnmuirproject.org/news-logging-for-dollars.html

Timber Harvest Opposing View #18 - “Recent editorials by timber industry spokespersons are a wildly misleading attempt to promote increased logging of western U.S. forests under the guise of reducing wildland fires …”

Hanson, Chad Ph.D., “**Logging Industry Misleads on Climate and Forest Fires**.” Guest Commentary in *New West*, July 11, 2008
http://www.newwest.net/topic/article/logging_industry_misleads_on_climate_and_forest_fires/C41/L41/

Timber Harvest Opposing View #19 - "Logging reduces the organic parent material (duff and woody residues) available for soil-formation processes."

Harvey, A. E., M. J. Larsen, and M. F. Jurgensen
“**Distribution of Ectomycorrhizae in a Mature Douglas-fir/larch Forest Soil in Western Montana**”
Forest Science, Volume 22, Number 4, 1 December 1976 , pp. 393-398(6)
http://www.ingentaconnect.com/content/saf/fs/1976/00000022/00000004/art00007;jsessionid=l2sdf2hphia2.alexandra

Timber Harvest Opposing View #20 - "For too long, we foresters took the public for granted, assuming unwavering support for those who grow the nation's wood fiber. Few noticed when the public's mood changed, and those who did were often ridiculed by disbelieving colleagues. Now we come to a day of reckoning: the public believes forests are too important to be entrusted to foresters. To restore lost confidence, foresters must first come out of hiding. We have a lot of explaining to do because, where forests are concerned, the public will no longer support what it cannot see and understand. Regaining the public's trust will take time. We must be prepared to answer hard questions about what we are doing and how our actions are impacting the environment. We must also help the public think through its forest management options. When we lay out these options, we must speak of much more than trees. Only then will our critics know we love forests as much as they do."

Houston, Alan Ph.D., **"Why Forestry is in Trouble with the Public."**
Evergreen magazine, October 1997.
http://evergreenmagazine.com/web/Why_forestry_is_in_trouble_with_the_public-v2.html

Timber Harvest Opposing View #21 - "SEC. 3. FINDINGS.

Congress finds the following:

> Commercial logging has many indirect costs which are very significant, but not easily measured, such as flooding damage and

relief of flooding damage through Federal funds, damage to the salmon fishing industry; and harm to the recreation and tourism industries."

H. R. 1494 text. April 4, 2001
http://www.agriculturelaw.com/legis/bills107/hr1494.htm

Timber Harvest Opposing View #22 - "Human tampering with nature has not been without costs. Human manipulation of existing ecosystems has also sometimes had unfortunate consequences."

Hudak, Mike Ph.D. "**From Prairie Dogs to Oysters: How Biodiversity Sustains Us**" from his book review of
The Work of Nature: How the Diversity of Life Sustains Us
by Yvonne Baskin, 1997
Newsletter of Earth Day Southern Tier, February/March 1999, p. 2
http://www.mikehudak.com/Articles/FromPrairieDogs9902.html

Timber Harvest Opposing View #23 - "In general, rate of spread and flame length were positively correlated with the proportion of area logged (hereafter, area logged) for the sample watersheds. Correlation coefficients of area logged with rate of spread were > 0.57 for five of the six river basins (table 5). Rate of spread for the Pend Oreille and Wenatchee River basins was strongly associated (r-0.89) with area logged. Correlation of area logged with flame length were > 0.42 for four of six river basins (table 5). The Deschutes and Methow River basins showed the strongest relations. All harvest techniques were associated with increasing rate of

spread and flame length, but strength of the associations differed greatly among river basins and harvesting methods." (pg.9)

"As a by-product of clearcutting, thinning, and other tree-removal activities, activity fuels create both short- and long-term fire hazards to ecosystems. The potential rate of spread and intensity of fires associated with recently cut logging residues is high, especially the first year or two as the material decays. High fire-behavior hazards associated with the residues can extend, however, for many years depending on the tree. Even though these hazards diminish, their influence on fire behavior can linger for up to 30 years in the dry forest ecosystems of eastern Washington and Oregon."

Huff, Mark H. Ph.D.; Ottmar, Roger D.; Alvarado, Ernesto Ph.D. Vihnanek, Robert E.; Lehmkuhl, John F.; Hessburg, Paul F. Ph.D. Everett, Richard L. Ph.D. 1995. "**Historical and current forest landscapes in eastern Oregon and Washington. Part II: Linking vegetation characteristics to potential fire behavior and related smoke production**" Gen. Tech. Rep. PNW-GTR-355. USDA Forest Service, Pacific Northwest Research Station. https://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/4706/PB96155213.pdf;jsessionid=C8DDB611DB29D3716BBF313AADBA2E70?sequence=1

Timber Harvest Opposing View #24 - "The Quincy Library Group's (QLG's) fuelbreak strategy represents a giant step backwards from the progressive development of rational fire policies established by the 1995 Federal Wildland Fire Management Policy and Program Review."

"The fact that the QLG admits that its Plan is inconsistent with these new policies (indeed, is almost gleefully defiant of them) says a lot about the credibility of the QLG's self-purported fire management expertise."

"In spite of (or more likely because of) the intensive 'fuels reduction' activities associated with commercial logging, the Fountain Fire was truly catastrophic in its effects."

"Even 'kinder, gentler' commercial logging still inflicts environmental impacts such as eroded topsoil, degraded water quality, destroyed wildlife habitat, and extirpated species that are every bit as much symptoms of forest health problems as large-scale, severe wildfires."

"And after spending millions of dollars creating the SNEP Report, it seems wise to use its information, not ignore it or opportunistically select out statements clearly worded as assumptions, values, or goals which run contrary to factual research findings. The QLG Plan has much more to do with timber extraction than with genuine fire protection, and in that respect, it constitutes more of a forest health threat than a real solution."

"The QLG Bill resembles similar 'panic legislation' that was passed during the early 1970s in which, following some large-scale wildfires in California, Congress allowed the Forest Service to access emergency firefighting funds to conduct 'presuppression' timber sales. Many fuelbreaks were cut in the Sierras during this period, and while costs rapidly rose into tens of millions of dollars, most of these fuelbreaks failed to perform adequately during wildfire suppression incidents. Congress quickly had to take away this funding source from the Forest Service. What has become of these old fuelbreaks? Almost without exception, the agency failed to monitor or maintain them, and in a modern-day version of 'cut and run' logging, many of these old fuelbreaks have converted to chaparral brush and 'dog-hair' thickets … a much more flammable vegetation type than the original forest cover. The QLG Bill appears to be 'deja vu' without evidence of Congress or the QLG being aware of this history of previous fuelbreak programs."

Ingalsbee, Timothy Ph.D. **"Logging for Firefighting: A Critical Analysis of the Quincy Library Group Fire Protection Plan."**
Unpublished research paper. 1997.
http://www.fire-ecology.org/research/logging-for-firefighting_2.htm

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Timber Harvest Opposing View #25 - “The notion that commercial logging can prevent wildfires has its believers and loud proponents, but this belief does not match up with the scientific evidence or history of federal management practices. In fact, it is widely recognized that past commercial logging, road-building, livestock grazing and aggressive firefighting are the sources for "forest health" problems such as increased insect infestations, disease outbreaks, and severe wildfires.”

“How can the sources of these problems also be their solution? This internal contradiction needs more than propaganda to be resolved. It is time for the timber industry and their supporters to heed the facts, not fantasies, and develop forest management policies based on science, not politics.”

Ingalsbee, Timothy Ph.D. 2000. “**Commercial Logging for Wildfire Prevention: Facts Vs Fantasies**”
http://www.fire-ecology.org/citizen/logging_and_wildfires.htm

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Timber Harvest Opposing View #26 - "Since the 'New Perspectives' program of the early 1990s, the agency has tried to dodge public opposition to commercial logging by using various euphemisms, such as this gem from the Siskiyou National Forest: Clearcuts are called 'minimum green tree retention units.' Accordingly, Forest Service managers have believed that if they simply refer to logging as 'thinning,' or add the phrases 'fuels reduction' or 'forest restoration' to the title of their timber sale plans, then the public will accept these projects at face value, and business-as-usual commercial logging can proceed. In the face of multiple scandals and widespread public skepticism of the Forest Service's credibility, it seems that only Congress is buying the agency's labeling scheme."

Ingalsbee, Timothy Ph.D. “**Logging without Limits isn't a Solution to Wildfires**” published in the *Portland Oregonian,* August 6, 2002
http://www.klamathforestalliance.org/Documents/loggingwithoutlimits.html

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Timber Harvest Opposing View #27 - “Thus, the use of commercial logging for fire hazard reduction poses yet another paradox: Logging removes the trees that normally survive fires, leaves behind the trees that are most often killed by fire, increases flammable fuel loads, and worsens fire weather conditions.” (pg. 5)

Ingalsbee, Timothy Ph.D. “**The wildland fires of 2002 illuminate fundamental questions about our relationship to fire**.”
The Oregon Quarterly, Winter 2002
http://fireecology.org/research/wildfire_paradox.pdf

Timber Harvest Opposing View #28 - "In the face of growing public scrutiny and criticism of the agency's logging policies and practices, the Forest Service and their enablers in Congress have learned to mask timber sales as so-called 'fuels reduction' and 'forest restoration' projects. Yet, the net effect of these logging projects is to actually increase fire risks and fuel hazards."

"Decades of encouraging private logging companies to take the biggest, oldest, most fire-resistant trees from public lands, while leaving behind a volatile fuel load of small trees, brush, weeds, stumps and slash has vastly increased the flammability of forestlands."

"In addition to post-fire salvage logging, the Forest Service and timber industry advocates in Congress have been pushing pre-fire timber sales, often falsely billed as hazardous fuels reduction or 'thinning' projects, to

lower the risk or hazard of future wildfires. In too many cases, these so-called thinning projects are logging thick-diameter fire-resistant overstory trees instead of or in addition to cutting thin-sized fire-susceptible understory trees. The resulting logging slash and the increased solar and wind exposure can paradoxically increase the fuel hazards and fire risks."

Ingalsbee, Timothy Ph.D. **"Fanning the Flames! The U.S. Forest Service: A Fire-Dependent Bureaucracy."**
Missoula Independent. Vol. 14 No. 24, June 2003
http://www.fire-ecology.org/research/USFS_fire_dependent.html

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Timber Harvest Opposing View #29 - "More than any other recent human activity, the legacy of commercial timber extraction has made public forests more flammable and less resilient to fire. Firstly, clearcut and high-grade logging have historically taken the largest, most fire-resilient, most commercially-valuable trees, and left behind dead needles and limbs (logging debris called "slash"), along with smaller trees and brush that are less commercially valuable but more flammable than mature and old-growth trees. The net effect is to increase the amount of available hazardous fuel."

"Secondly, the removal of large overstory trees also changes the microclimate of logged sites, making them hotter, drier, and windier, which increases the intensity and rate of spread of wildfires. Third, the creation of densely-stocked even-aged plantations of young conifers made sites even more flammable since this produced a solid mass of highly combustible conifer needles within easy reach of surface flames. These changes in the fuel load, fuel profile, and microclimate make logged sites more prone to high-intensity and high-severity wildfires."

Ingalsbee, Timothy Ph.D. 2005. "**A Reporter's Guide to Wildland Fire**."
Published by the Firefighters United for Safety, Ethics, and Ecology (FUSE), January 2005
http://www.commondreams.org/news2005/0111-14.htm

Timber Harvest Opposing View #30 - “Linear developments may result in habitat avoidance for grizzly bears. Logging-truck traffic in the Kimsquit Valley in British Columbia resulted in a 78% reduction in use of the “Zone of Hauling Activity” by radio collared bears compared to non-hauling periods (16). For 14 hours/day, 3%-23% of each bear's home range was unavailable to them because of disturbance.”

“The impacts of land-use activities on wolverines are *likely* similar to those on grizzly bears. Wolverines seem to have been most affected by activities that fragment and supplant habitat, such as human settlement, extensive logging, oil and gas development, mining, recreational developments, and the accompanying access. Wolverine populations that are now at the edge of extirpation have been relegated to the last available habitat that has not been developed, extensively modified, or accessed by humans.”

Jalkotzy, M.G., P.I. Ross, and M.D. Nasserden. 1997. “**The Effects of Linear Developments on Wildlife: A Review of Selected Scientific Literature**.” Prepared for Canadian Association of Petroleum Producers. Arc Wildlife Services Ltd., Calgary. 115pp.
http://www.capp.ca/getdoc.aspx?DocId=24902&DT=PDF

Timber Harvest Opposing View #31 - “History, not science, refutes the claim that logging helps to prevent forest fires.

The forests of the West are far more vulnerable to fire due to a century of industrial logging and fire suppression. Logging has removed most of the older, fire-resistant trees from the forests.

Fire suppression has encouraged many smaller and more flammable trees, brush and dense plantations to fill the holes. Logging has set the forests of the West up to burn big and hot.

More logging will not fix this."

Keene, Roy "**Logging does not prevent wildfires**"
Guest Viewpoint, the Eugene *Register Guard*
January 11, 2009
http://www.highbeam.com/doc/1G1-192070397.html

Timber Harvest Opposing View #32 - "Fear of wildfire is heavily used to sell these forest "restoration" schemes. Logging has not been proven, in practice, to reduce fire frequency or intensity. Historically, the largest, most destructive blazes, like the Tillamook conflagration, were caused from logging or fueled by slash. Unlogged forests, cool and shaded, are typically more fire resistant than cut over, dried-up stands choked with slash and weeds.

Large-scale logging (by any name) has devalued our forests, degraded our waters, damaged soils, and endangered a wide variety of plants and animals. How will the current round of politically and environmentally propelled 'restorative' logging proposals differ, in practice, from past logging regimes?"

Keene, Roy **Restorative Logging? "More rarity than reality"**
Guest Viewpoint, the Eugene *Register Guard*
March 10, 2011
http://eugeneweekly.com/2011/03/03/views3.html

Timber Harvest Opposing View #33 - "Timber harvesting operations affect hydrologic processes by reducing canopy interception and evapotranspiration. Many studies have documented changes in soil properties following tractor yarding (Stone, 1977; Cafferata, l983), and low-ground-pressure skidding (Sidle and Drlica, 1981). More recently, researchers have evaluated cable yarding (Miller and Sirois, 1986; Purser and Cundy, 1992). In general, these studies report decreased hydraulic conductivity and increased bulk density in forest soils after harvest."

Keppeler, Elizabeth T. Robert R. Ziemer Ph.D., and Peter H. Cafferata
"Effects of Human-Induced Changes on Hydrologic Systems."
An American Water Resources Association publication, June 1994
http://www.fs.fed.us/psw/publications/ziemer/Ziemer94a.PDF

Timber Harvest Opposing View #34 - "Among these four species of amphibians, the spotted salamander is most likely to be affected adversely by the logging as this species of salamander relies on dense forests with full canopies (Harding, 1997)."

"Looking at the study on a larger scale, the potential for changes caused by logging is great. Absence of trees could influence water temperature by altering available sunlight, conductivity by changing the amount of organic matter that collects in the vernal ponds, or pH if the logging process deposits foreign residues to the area. Also heavy equipment used to harvest the timber has the potential to alter the terrain."

"Modifications to the landscape could change how water flows and collects at the surface and change the size, shape, and location of the vernal ponds. Loss or alteration to small temporary water sources less than four hectares can be extremely detrimental to amphibians water (Semlitsch, 2000). Without vernal ponds amphibians would have difficulty inhabiting forested areas because they rely on the ponds as breeding grounds. If logging disturbs the ponds, amphibian populations could diminish in the areas that surround these vernal pools."

Klein, Al 2004. ***Logging Effects on Amphibian Larvae Populations in Ottawa National Forest*.**
http://www.nd.edu/~underc/east/education/documents/AKlein2004Pre-loggingsurveyofamphibianlarvaeinvernalpools.pdf

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Timber Harvest Opposing View #35 - "The Congressional Research Service (CRS) recently addressed the effect of logging on wildfires in an August 2000 report and found that the current wave of forest fires is not related to a decline in timber harvest on Federal lands. From a quantitative perspective, the CRS study indicates a very weak relationship between acres logged and the extent and severity of forest fires. To the contrary, in the most recent period (1980 through 1999) the data indicate that fewer acres burned in areas where logging activity was limited."

"Qualitative analysis by CRS supports the same conclusion. The CRS stated: "[T]imber harvesting removes the relatively large diameter wood that can be converted into wood products, but leaves behind the small material, especially twigs and needles. The concentration of these fine fuels on the forest floor increases the rate of spread of wildfires." Similarly, the National Research Council found that logging and clearcutting can cause rapid regeneration of shrubs and trees that can create highly flammable fuel conditions within a few years of cutting."

Laverty, Lyle, USDA Forest Service and Tim Hartzell U.S. Department of the Interior

"**A Report to the President in Response to the Wildfires of 2000**", September 8, 2000.
http://frames.nacse.org/6000/6269.html

Timber Harvest Opposing View #36 - "I will turn first to forest thinning aimed at reducing fire risks. There is surprisingly little scientific information about how thinning actually affects overall fire risk in national forests."

"How can it be that thinning could increase fire risks? First, thinning lets in sunlight and wind, both of which dry out the forest interior and increase flammability. Second, the most flammable material - brush, limbs, twigs, needles, and saplings - is difficult to remove and often left behind. Third, opening up forests promotes brushy, flammable undergrowth. Fourth, logging equipment compacts soil so that water runs off instead of filtering in to keep soils moist and trees healthy. Fifth, thinning introduces diseases and pests, wounds the trees left behind, and generally disrupts natural processes, including some that regulate forest health, all the more so if road construction is involved."

Lawrence, Nathaniel, NRDC senior attorney
"**Gridlock on the National Forests**" Testimony before the U.S. House of Representatives Subcommittee on Forests and Forest Health (Committee on Resources) December 4, 2001.
http://www.nrdc.org/land/forests/tnl1201.asp

Timber Harvest Opposing View #37 - "Those who would argue that this form of logging has any positive effects on an ecosystem are clearly

misinformed. This type of logging has side effects related to wildfires, first and foremost being that the lumber companies aren't interested in hauling out all the smaller trees, branches, leaves, pine needles, sawdust, and other debris generated by cutting all these trees. All this debris is left on site, quickly dries out, and is far more flammable sitting dead on the ground than it was living in the trees. Smaller, non-commercially viable trees are left behind (dead) as well - creating even more highly flammable fuel on the ground.

Leitner, Brian. "**Logging Companies are Responsible for the California Wildfires**." the Democratic Underground, October 30, 2003.
http://www.democraticunderground.com/articles/03/10/30_logging.html

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Timber Harvest Opposing View #38 - "We concluded that commercial timber sales do not meet the criteria for forest restoration." (Pg. 11)

Long, Richard D., U.S. Department of Agriculture Office of Inspector General
"Western Region Audit Report: Forest Service National Fire Plan Implementation"
Report No. 08601-26-SF, November 2001.
http://maps.wildrockies.org/ecosystem_defense/Resources_Species_Topics/Fire/Misuse%20of%20Fire%20Plan%20funds.pdf

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Timber Harvest Opposing View #39 - "In hopes of ending conflicts over "multiple use," an independent scientific committee has proposed that "ecological sustainability" should become the principal goal in managing the U.S. national forests and grasslands, which since 1960 have been

under a congressional mandate to serve industry, recreation, and conservation all at once."

Mann, Charles C. Ph.D. and Mark L. Plummer Ph.D.
"Call for 'Sustainability' in Forests Sparks a Fire"
Science 26 March 1999: Vol. 283. no. 5410, pp. 1996 – 1998
http://www.sciencemag.org/content/283/5410/1996.summary

Timber Harvest Opposing View #40 - "Logging removes a mass that harbor a myriad of organisms, from bacteria and actinomycetes to higher fungi. The smaller organisms, not visible to the unaided eye, are still important components of the system."

Maser, C. Ph.D., and J. M. Trappe Ph.D.
"**The Seen and Unseen World of the Fallen Tree**", 1984
USDA Forest Service, *GTR-PNW-164*
http://www.fs.fed.us/pnw/publications/pnw_gtr164/

Timber Harvest Opposing View #41 - "Logging removes mature and maturing trees which conserve essential elements, whereas the area containing new very young planted trees following logging are susceptible to erosion and essential element loss." (pg.5)

"Logging removes tree parts that would have created and maintained diversity in forest communities." (pg. 44)

Maser, C. Ph.D., R. F. Tarrant, J. M. Trappe Ph.D., and J. F. Franklin Ph.D. 1988

"***The Forest to the Sea: A Story of Fallen Trees***"
USDA Forest Service, *GTR-PNW-GTR-229*
http://www.fs.fed.us/pnw/publications/pnw_gtr229/

Timber Harvest Opposing View #42 - "In addition to the direct effects of habitat loss and fragmentation, logging typically reduces ecosystem health by:

> a) damaging aquatic habitats through siltation, reduction in stream complexity and increased water temperatures."

McIntosh, B.A., J.R. Sedell, J.E. Smith, R.C. Wissmar
S.E. Clarke, G.H. Reeves, and L.A. Brown
"**Management history of eastside ecosystems: changes in fish habitat over 50 years, 1935-1992**." 1994
GTR-321 93-181
http://www.fs.fed.us/pnw/publications/pnw_gtr321/

Timber Harvest Opposing View #43 - "Logging practices can indirectly result in changes in the biological components of a stream, and can have direct and indirect on the physical environment in streams.

The primary environmental changes of concern are the effects of siltation, logging debris, gravel scouring, destruction of developing embryos and alevins, blockage of streamflow, decrease in surface and intragravel dissolved oxygen, increase in maximum and diel water temperatures, changes in pool/riffle ratios and cover, redistribution of fishes, reduction in fish numbers, and reduction in total biomass."

Moring, John R. Ph.D. 1975. “**The Alsea Watershed Study: Effects of Logging on the Aquatic Resources of Three Headwater Streams of the Alsea River, Oregon – Part III**.” *Fishery Report Number 9* Oregon Department of Fish and Wildlife.
http://www.for.gov.bc.ca/hfd/library/ffip/Moring_JR1975b.pdf

Timber Harvest Opposing View #44 - "Biodiversity in managed ecosystems is poor. Less biodiverse communities and ecosystems are more susceptible to adverse weather (such as drought) and exotic invaders, and have greatly reduced rates of biomass production and nutrient cycling."

"All of these studies show that ecosystem functioning is decreased as the number of species in a community decreases. Declines in functioning can be particularly acute when the number of species is low, such as in most managed ecosystems including croplands or timber plantations."

"Recent evidence demonstrates that both the magnitude and stability of ecosystem functioning are likely to be significantly altered by declines in local diversity, especially when diversity reaches the low levels typical of managed ecosystems."

Naeem, Shahid Ph.D., F.S. Chapin III Ph.D., Robert Costanza Ph.D., Paul R. Ehrlich Ph.D., Frank B. Golley Ph.D., David U. Hooper Ph.D. J.H. Lawton Ph.D., Robert V. O’Neill Ph.D., Harold A. Mooney Ph.D. Osvaldo E. Sala Ph.D., Amy J. Symstad Ph.D., and David Tilman Ph.D. **"Biodiversity and Ecosystem Functioning: Maintaining Natural Life Support Processes."** *Issues in Ecology* No. 4. Fall 1999.
http://www.esa.org/science_resources/issues/TextIssues/issue4.php

Timber Harvest Opposing View #45 - "As a result of the Forest Service's well-documented mismanagement over many years of the timber sale program, taxpayers also have been stuck with the tab for hundreds of millions of dollars worth of subsidies to a profitable timber industry."

Nappier, Sharon. ***Lost in the Forest: How the Forest Service's Misdirection, Mismanagement, and Mischief Squanders Your Tax Dollars***. *Taxpayers for Common Sense*, 2002.
http://www.ourforests.org/fact/lostintheforest.pdf

Timber Harvest Opposing View #46 - "Agroforestry does reduce biodiversity. In forests used for logging, whole-landscape management is crucial. Here, emphasis is placed on areas of intensive use interspersed with areas for conservation and catchment purposes. Management strategies for sustainable forestry are being developed, but there is a need for further interaction among foresters, ecologists, community representatives, social scientists, and economists."

Noble, Ian R. and Rodolfo Dirzo Ph.D. **"Forests as Human-Dominated Ecosystems."** *Science* Vol. 277. No. 5325, pp. 522 - 525. 25 July 1997.
http://www.sciencemag.org/content/277/5325/522.abstract?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=logging&searchid=1136659907310_5043&FIRSTINDEX=0&journalcode=sci

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Timber Harvest Opposing View #47 - "The U.S. Forest Service has been sitting on a public opinion survey it commissioned, not knowing what to do with the results. The problem is that most people surveyed want more wilderness and less logging on the Green Mountain National Forest (GMNF), while the federal agency seems to want to build more roads and cut more trees."

"The survey conducted by Dr. Robert Manning of the School of Natural Resources at the University of Vermont, polled 1,500 Vermont households in the spring of 1995. A survey with similar results was completed last fall for the White Mountain National Forest in New Hampshire. 'It is clear that New England residents value the national forest for many reasons, but non-material values, such as aesthetics and ecological protection, are more important than material values, such as economic development,' said Dr. Manning."

"The responses to several survey questions indicate a strong public desire for more areas of wild, untouched nature on the GMNF and less roadbuilding and logging. Very few people supported clearcutting and other types of industrial logging, especially if natural beauty or wildlife habitat were harmed."

"For example:

- 82 percent wanted to ban clearcutting,
- 82 percent said logging should not hurt scenic beauty,
- 80 percent of the respondents wanted to protect remaining undisturbed forest; and
- 72 percent urged prohibition of logging if bear or other wildlife habitat would be harmed."

"Only 36 percent felt that management of the GMNF should emphasize timber and lumber products; and only 15 percent felt that jobs are more important than protection of endangered species."

"'The results of this survey and a similar one on the White Mountain National Forest in Vermont should serve as loud wake-up calls to the U.S. Forest Service,' said Northup. 'Forest Service officials have two choices: either begin a major overhaul of the agency's management programs or ignore the wishes of the people they are supposed to serve'."

Northup, Jim. 1999. **"Public Wants More Wilderness, Less Logging on Green Mountain NF"**. Press Release by Forest Watch, a Vermont-based environmental organization. http://www.forestwatch.org/content.php?id=10

Timber Harvest Opposing View #48 - "Still, forestry experts warned in the 2000 plan that logging should be used carefully and rarely; in fact, the original draft states plainly that the "removal of large merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk."

"Now, critics charge that the Bush administration is ignoring that warning. Neil Lawrence, a policy analyst with the Natural Resource Defense Council, claims that Washington has taken a far more aggressive approach to incorporating commercial logging in its wildfire prevention plans. As a result, Lawrence and other critics say, the National Fire Plan is becoming a feeding ground for logging companies. Moreover, critics claim the administration's strategy, far from protecting the lives and homes of those most at risk, could actually increase the likelihood of wildfires."

Okoand Ilan Kayatsky, Dan. "**Fight Fire with Logging?**" *Mother Jones*, August 1, 2002 http://motherjones.com/politics/2002/08/fight-fire-logging

Timber Harvest Opposing View #49 - “In response to catastrophic wildfires, wide-reaching forest management policies have been enacted in recent years, most notably the Healthy Forests Restoration Act of 2003. A key premise underlying these policies is that fire suppression has resulted in denser forests than were present historically in some western forest types. Therefore, although reducing the threat of wildfire is the primary goal, forest managers commonly view fuel treatments as a means to restore historic forest structure in those forest types that are outside of their historic range of variation. This study evaluates where both wildfire mitigation and restoration of historic forest structure are potentially needed in the ponderosa pine–dominated montane forest zone of Boulder County, Colorado. Two spatial models were overlain: a model of potential fireline intensity and a model of historic fire frequency. The overlay was then aggregated by land management classes.

Contrary to current assumptions, results of this study indicate that both wildfire mitigation and restoration of historic forest structure are needed in only a small part of the study area, primarily at low elevations.

Furthermore, little of this land is located on Forest Service land where most of the current thinning projects are taking place. We question the validity of thinning as a means both to reduce the threat of wildfire and to restore historic forest structure in the absence of site-specific data collection on past and present landscape conditions.”

Platt, Rutherford V. Ph.D., Thomas T. Veblen Ph.D., and Rosemary L. Sherriff **“Are Wildfire Mitigation and Restoration of Historic Forest Structure Compatible? A Spatial Modeling Assessment”** Published Online: by the by Association of American Geographers. Sep. 8, 2006
http://www.ingentaconnect.com/content/routledg/anna/2006/00000096/00000003/art00001

Timber Harvest Opposing View #50 - "Private lands are more suitable for timber production. National Forest land is on average of lower productivity and on steeper, higher elevation terrain than are private forestlands."

Powell, Douglas S. Ph.D, Joanne L. Faulkner, David R. Darr, Zhiliang Zhu Ph.D. and Douglas W. MacCleery. 1992. **"Forest Resources of the United States."** USDA Forest Service. Rocky Mt. Forest and Range Experiment Station. *Gen. Tech. Rep. RM-234*.
http://www.fs.fed.us/rm/pubs_rm/rm_gtr234.html

Timber Harvest Opposing View #52 - "Less than 5% of America's original forests remain, and these forests are found primarily on federal lands. Logging in the last core areas of biodiversity is destroying the remaining intact forest ecosystems in the United States. At the current rate of logging, these forests and their priceless biological assets will be destroyed within a few decades.

We urge Congress to pass the Act to Save America's Forests. It is the first nationwide legislation that would halt and reverse deforestation on all our federal lands. By implementing protective measures based on principles of conservation biology, the bill provides a scientifically sound legislative solution for halting the rapid decline of our nation's forest ecosystems.

The Act to Save America's Forests will:

- Make the preservation and restoration of native biodiversity the central mission of Federal forest management agencies.

- Ban extractive logging in core areas of biodiversity and the last remnant original forest ecosystems: roadless areas, ancient forests and special areas of outstanding biological value.

- Protect sensitive riparian areas and watershed values by banning extractive logging in streamside buffer zones.

- End clearcutting and other even age logging practices on federal land.

- Establish a panel of scientists to provide guidance to federal forest management.

We believe it is our professional responsibility to ask Congress to align Federal forest management with modern scientific understandings of forest ecosystems. Passage of the Act to Save America's Forests will give our nation's precious forest ecosystems the best chance or survival and recovery into the 21st century and beyond."

Raven, Peter, Ph.D., Jane Goodall, C.B.E., Ph.D., Edward O. Wilson, Ph. D. and over 600 other leading biologists, ecologists, foresters, and scientists from other forest specialties. From a 1998 letter to congress.
http://www.saveamericasforests.org/resources/Scientists.htm

Timber Harvest Opposing View #53 - "The Act to Save America's Forests is based on the principles of conservation biology. It would make the protection native biodiversity the primary goal of federal forest management agencies. The bill would protect over 20 million acres of core forest areas throughout the nation, including ancient forests, roadless areas, key watershed, and other special areas. It is a comprehensive, sustainable,

and ecologically-sound plan for protecting and restoring the entire federal forest system.

If the current pace of logging planned by the Forest Service continues, nearly all of America's ancient and roadless wild forests will soon be lost forever. According to a recent report by the World Resources Institute, only one percent of the original forest cover remains in large blocks within the lower 48 states. The Act to Save America's Forests incorporates the solution recommended by the report, namely to protect core forest areas from any logging and to allow sustainable forest practices around these protected forests. Endorsed by over 600 leading scientists, this bill may be the last hope for America's forests."

Raven, Peter, Ph.D.,
from his February 9, 2001 letter to Senator Jean Carnahan
http://www.saveamericasforests.org/Raven.htm

Timber Harvest Opposing View #54 - "It is well established that logging and roadbuilding often increase both fuel loading and fire risk. For example, the Sierra Nevada Ecosystem Project (SNEP) Science Team (1996) concluded that "timber harvest…. has increased fire severity more than any other recent human activity" in the Sierra Nevada. Timber harvest may increase fire hazard by drying of microclimate associated with canopy opening and with roads, by increases in fuel loading by generation of activity fuels, by increases in ignition sources associated with machinery and roads, by changes in species composition due to opening of stands, by the spread of highly flammable non native weeds, insects and disease, and by decreases in forest health associated with damage to soil and residual trees (DellaSala and Frost, 2001; Graham et al., 2001; Weatherspoon et al., 1992; SNEP Science Team, 1996). Indeed a recent literature review reported that some studies have found a positive correlation between the occurrence of past logging and present fire hazard in some forest types in the Interior Columbia Basin (DellaSala and Frost, 2001)."

Roberson, Emily B. Ph.D., Senior Policy Analyst, California Native Plant Society
Excerpt from a letter to Chief Dale Bosworth and 5 members of congress
http://www.plantsocieties.org/PDFs/Fire%20letter%20CNPS%208.02%20letterhead.pdf

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Timber Harvest Opposing View #55 - "I will discuss my views on how activities related to timber harvest adversely affect coastal salmonids in California by destroying, altering, or otherwise disturbing the freshwater habitats upon which these fish depend during crucial phases of their life cycle. I base these opinions on my research and observations in the field, as well as my review of and familiarity with the scientific literature and publications of government agencies, commissions, and scientific review panels. Below I discuss in some detail the life history and habitat needs of coho salmon to illustrate how timber harvest and related roads affect this threatened species. Although Chinook salmon and steelhead trout have similar life histories and habitat needs, and also are negatively affected by timber harvest, I will use coho salmon in my discussion."

"Loss or degradation of stream habitat has been and remains the single most significant cause of the decline of anadromous salmonids in general in the Pacific Northwest. In my experience the most pervasive and severe impacts to coastal watersheds in California inhabited by coho salmon result from logging and associated activities. These activities cause significant alteration and degradation to coho salmon habitat by 1) increasing sediment input to salmon bearing streams and their tributaries: 2) by decreasing input of LWD into waterways; 3) by altering streamflow regimes, increasing the likelihood of scouring flows and flooding; and 4) by increasing water temperatures. These pervasive changes due to timber harvest decrease the complexity and suitability of coho salmon habitat, including adversely affecting insects and other organisms that provide food for fish."

Roelofs, Terry D. Ph.D. Testimony for the California State Water Board

and Regional Water Quality Control Boards Regarding Waivers of Waste Discharge Requirements on Timber Harvest Plans. August 2003. http://webcache.googleusercontent.com/search?q=cache:QNy_aih1RxEJ:edennapa.org/thp/roelofstestimony.doc+%22timber+harvest%22+ph.d.+adverse&hl=en&ct=clnk&cd=5&gl=us

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Timber Harvest Opposing View #56 - "People moving to the region may do so for reasons related to the social environment and the physical landscape but not care about specific Federal land management practices. We found this not to be true, since 92 percent were concerned with how Federal lands were managed. The most frequent preferences for managing Federal lands were water/watershed and ecosystem protection (table 3). Timber harvesting was cited by 16 percent, grazing and ranching by 6 percent, and mineral exploration/mining by less than 1 percent. Overall, protective strategies made up 76 percent of the preferred management strategies and commodity-based strategies 23 percent. This same trend is evident for the second and third most stated preferences. These findings also contradict the longstanding view of the Federal lands as a public warehouse of commodities to be harvested and jobs to be filled. For newcomers in the rural West, the value of these public lands is related to protecting and preserving them."

Rudzitis, Gundars. 1999 "**Amenities Increasingly Draw People to the Rural West"** *Rural Development Perspectives*, vol. 14, no. 2 http://www.ers.usda.gov/publications/rdp/rdpsept99/rdpsept99b.pdf

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Timber Harvest Opposing View #57 - “Once clear-cutting has occurred, regulation and human silvicultural practices become responsible for the revegetation that follows. The creation of new forest succession patterns are the result of human control over the growing environment. Rather than proceeding at a natural pace, humans attempt to speed up the forest succession process to quickly return to a situation where harvesting is again possible. Reforestation of the disturbed area after clear-cutting also emphasizes maintaining control over the distribution and quality of forest species.

Simplification is a state that results from the forest being harvested before it reaches maturity. Logging simplifies forest ecosystems (Dudley et al 1995) by narrowing the age range of the stand and suppressing diversification through repeated harvesting, burning to remove slash, and replanting with hybrid seedlings. Simplification affects the health and productivity of the forest because simplified forests lack the variety found in older stands, including species diversity, vertical structure, and microhabitat. From an ecological standpoint, a simplified forest of a particular age has less overall bio-mass per acre than a natural forest of the same age, but a simplified forest produces a higher volume of merchantable timber.

Scott, Mark G.
“**Forest Clearing in the Gray’s River Watershed 1905-1996**”
A research paper submitted in partial fulfillment of the
requirements for the degree of MASTER OF SCIENCE in GEOGRAPHY
Portland State University, 2001
http://www.markscott.biz/papers/grays/chapter1.htm

Timber Harvest Opposing View #58 - “Within this volatile atmosphere the Bush Administration presented a new proposal for fire prevention called the "Healthy Forest Initiative." The plan received wide coverage in the national media in August and September 2002 and continues to be at the center of an attempt to significantly shift public land management in the United States. At the core of the plan is an effort to create private sector incentives to promote logging/thinning projects in the national forests.”

Short, Brant, Ph.D. and Dayle C. Hardy-Short Ph.D.
"**Physicians of the Forest": A Rhetorical Critique of the Bush Healthy Forest Initiative**"
Electronic Green Journal, Issue #19, December 2003
http://escholarship.org/uc/item/4288f8j5

Timber Harvest Opposing View #59 - "Logging on the National Forests provides less than 5% of the nation's timber supply, but costs the taxpayers more than 1 billion dollars in subsidies every year. Nor is logging a good job provider compared to recreation, which by Forest Service estimates provides over 30 times the economic benefits of logging. These forests are the last remnants of the virgin forests that covered the country, and now have far more value as forest ecosystems, watershed/water supply protection, and recreational assets than for logging. In fact, the justification for the Weeks Act in 1911 which established national forests in the east, was watershed protection.

(A major barrier to the Forest Service changing its ways is that these increased recreational economic benefits flow into the local economy, not to the Forest Service itself, whereas extractive uses of the national forests contribute directly to Forest Service budgets.)

"Our nation is engaged in a great debate over the real purpose of our national forests, with the weight of public opinion swinging more and more strongly toward preservation. Certainly this nation should not be subsidizing logging when it is clear that we understand so little about the functioning of these enormously complex and ancient forest ecosystems that provide millions of people with clean air and water, as well as homes for a myriad of plants and wildlife that can live nowhere else."

Sierra Club. 2005 "**Ending Commercial Logging on Public Lands**"
http://northcarolina.sierraclub.org/pisgah/conservation/ecl.html

Timber Harvest Opposing View #60 - "Timber harvesting in British Columbia influences (a) forest hydrology; (b) fluvial geomorphology; (c) terrain stability; and (d) integrated watershed behavior. Impacts on forest hydrology are well understood and include increased average runoff, total water yield, increased storm runoff and advances in timing of floods. Stream channels and valley floors are impacted differently by fine sediment, coarse sediment and large woody debris transport. Terrain stability is influenced through gully and mass movement processes that are accelerated by timber harvesting. Impacts on integrated watershed behavior are assessed through disturbed sediment budgets and lake sediments."

Slaymaker, Olav Ph.D. "**Assessment of the Geomorphic Impacts of Forestry in British Columbia**"
AMBIO: A Journal of the Human Environment 29(7):381-387. 2000
http://www.bioone.org/doi/abs/10.1579/0044-7447-29.7.381

Timber Harvest Opposing View #61 - "In sum, 100 years of fire suppression and logging have created conditions that threaten central Oregon's natural resources and communities."

"Thus it is inexplicable that the solution proposed by President Bush and some members of Congress emphasizes fire suppression and commercial logging, the very practices that created today's crisis. The federal government continues to attempt to suppress over 99% of all wildland fires. The Forest Service continues to measure its success not in terms of ecosystems restored, but in fires put out. The President's Healthy Forest Initiative, as embodied in H.R. 1904, promotes commercial logging at the expense of citizen participation and oversight of the forests we own."

Stahl, Andy. "**Reducing the Threat of Catastrophic Wildfire to Central Oregon Communities and the Surrounding Environment**." Testimony before the House Committee on Resources, August 25, 2003 http://www.propertyrightsresearch.org/2004/articles6/testimony_of_andy_stahl.htm

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Timber Harvest Opposing View #62 - "Fire, just like insects and disease, are a natural and beneficial part of forest ecosystems and watersheds. Without these natural processes the forest ecosystems quickly degrade. Excessive logging removes and reduces cooling shade adding to the hotter, drier forests along with logging debris creating a more flammable forest. Current "forest management" practices, road building and development cause forest fires to rage for hundreds of miles.

The Sierra Nevada Ecosystem Project said in a report to the U.S. Congress that timber harvests have increased fire severity more than any other recent human activity. Logging, especially clear cutting, can change the fire climate so that fires start more easily, spread faster, further, and burn hotter causing much more devastation than a fire ignited and burned under natural conditions. If we stop the logging and stop building fire prone developments, we minimize the loss of lives and property suffered by people in fires.

As long as the people of America let politicians, timber executives, and the Forest Service get away with it - it will not stop. Those corporations that profit will continue to lie, cheat and steal to continue to make more money from our losses. Just like big tobacco."

Strickler, Karyn and Timothy G. Hermach, "**Liar, Liar, Forests on Fire: Why Forest Management Exacerbates Loss of Lives and Property**" Published by *CommonDreams.org*, October 31, 2003 http://www.commondreams.org/scriptfiles/views03/1031-10.htm

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Timber Harvest Opposing View #63 - "The agency's commercial timber program can contribute to the risk and severity of wildfire in the National Forests, yet Congress devotes nearly one-third of the Forest Service's entire budget to this wasteful program." (pg. 1)

"Do not utilize the commercial timber program to reduce the risk of fire. Commercial incentives undercut forest health objectives and can actually increase the risk of fire." (pg. 9)

"Commercial logging, especially of larger, fire-resistant trees, in the National Forests is one of several factors contributing to the risk and severity of wildfire." (pg. 19)

"Commercial logging and logging roads open the forest canopy, which can have two effects. First, it allows direct sunlight to reach the forest floor, leading to increased evaporation and drier forests.[5] As a consequence, ground fuels (grass, leaves, needles, twigs, etc.) dry out more quickly and become susceptible to fire. Second, an open canopy allows more sunlight to reach the understory trees, increasing their growth.[6] This can lead to weaker, more densely-packed forests." (pgs. 19-20)

"Congress and the Forest Service continue to rely on the commercial logging program to do something it will never accomplish – reduce fire risk. The commercial logging program is designed to provide trees to private timber companies, not to reduce the risk of fire." (pg. 20)

Taxpayers for Common Sense. "***From the Ashes:*** **Reducing the Harmful Effects and Rising Costs of Western Wildfires**"
Washington DC , Dec. 2000
http://www.ourforests.org/fact/ashes.pdf

Timber Harvest Opposing View #64 - "Indiscriminate logging is not a viable solution to reducing wildfire risk. Logging can actually increase fire

danger by leaving flammable debris on the forest floor. Loss of tree canopy lets the sun in, encouraging the growth of brush, increases wind speed and air temperature, and decreases the humidity in the forest, making fire conditions even worse."

Thomas, Craig. **"Living with risk: Homeowners face the responsibility and challenge of developing defenses against wildfires**." *Sacramento Bee* newspaper, July 1, 2007. http://www.sierraforestlegacy.org/NR_InTheNews/SFLIP_2007-07-01_SacramentoBee.php

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Timber Harvest Opposing View #65 - "Timber harvest, through its effects on forest structure, local microclimate, and fuels accumulation, has increased fire severity more than any other recent human activity."(pg.62)

University of California; SNEP Science Team and Special Consultants
1996 "***Sierra Nevada Ecosystem Project*: Final Report to Congress**"
Volume 1, Chapter 4 – Fire and Fuels.
http://ceres.ca.gov/snep/pubs/web/PDF/v1_ch04.pdf

Timber Harvest Opposing View #67 - "The development of sound forest-management policies requires that consideration be given to the economic benefits associated with competing uses of forest resources. The benefits that may be provided under different management regimes include both use values (such as those provided by timber harvesting and recreation) and passive-use (or nonuse) values, including existence value, option value and quasi-option value. Many of these benefits are not revealed in

market transactions, and thus cannot be inferred from conventional data on prices and costs."

Vincent, James W. Ph.D., Daniel A. Hagen, Ph.D., Patrick G. Welle Ph.D. and Kole Swanser. 1995. ***Passive-Use Values of Public Forestlands: A Survey of the Literature.***
A study conducted on behalf of the U.S. Forest Service.
http://www.icbemp.gov/science/vincent.pdf

Timber Harvest Opposing View #68 - "Unfortunately, there are number of massive logging proposals, disguised as hazardous fuels treatments, that have put environmentalists at odds with the Forest Service. Nearly all of these proposals focus primarily on the removal of mature and old-growth trees. These proposals continue even with overwhelming evidence that commercial logging is more of a problem than a solution. There's simply a cognitive disconnect between the Forest Service's scientists and its timber sale planners, whose budgets are dependent upon selling valuable mature trees.

Ironically, this very type of logging, experts inform us, is likely to increase, not decrease, the frequency and severity of wildland fires.

In the Forest Service's own National Fire Plan, agency scientists warned against the use of commercial logging to address fire management. The report found that 'the removal of large, merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk.' "

Voss, René
"**Getting Burned by Logging**," July 2002
The Baltimore Chronicle
http://www.baltimorechronicle.com/firelies_jul02.shtml

Timber Harvest Opposing View #69 - "Another surprising finding is that mechanical fuels treatment, commonly known as logging and thinning, typically has little effect on the spread of wildfires. In fact, in some cases, it can increase wildfires' spread and severity by increasing the fine fuels on the ground (slash) and by opening the forest to greater wind and solar penetration, drying fuels faster than in unlogged forests."

Wuerthner, George. "**Logging, thinning would not curtail wildfires**"
The Eugene *Register-Guard*, December 26, 2008
http://wuerthner.blogspot.com/2008/12/logging-thinning-would-not-curtail.html

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Timber Harvest Opposing View #70 - "Logging equipment compacts soils. Logging removes biomass critical to future soil productivity of the forest. Logging disturbs sensitive wildlife. Logging typically requires roads and skid trails which create chronic sources of sedimentation that degrades water quality and aquatic organism habitat. Logging roads and skid trails are also a major vector for the spread of weeds. Logging disrupts nutrient cycling and flows. Logging can alter species composition and age structure (i.e. loss of old growth). Logging can alter fire regimes. Logging can change water cycling and water balance in a drainage. The litany of negative impacts is much longer, but suffice it to say that anyone who suggests that logging is a benefit or benign is not doing a full accounting of costs."

Those who suggest that logging “benefits” the forest ecosystem are using very narrow definitions of “benefit.” Much as some might claim that smoking helps people to lose weight and is a “benefit” of smoking.”

Wuerthner, George “**Who Will Speak For the Forests?**”
NewWest, January 27, 2009
http://www.newwest.net/topic/article/who_will_speak_for_the_forests/C564/L564/

Timber Harvest Opposing View #71 - "After logging, peak pipeflow was about 3.7 times greater than before logging."

"The use of heavy logging equipment was expected to compact the soil, reduce infiltration rates, and increase surface runoff. In addition, heavy equipment might collapse some of the subsurface pipes, increasing local pore water pressure and the chance of landslides (Sidle, 1986)."

Ziemer, Robert R. Ph.D., **"Effect of logging on subsurface pipeflow and erosion: coastal northern California, USA."** Proceedings of the Chengdu Symposium, July 1992. *IAHS Publication*. *No. 209*, 1992
http://www.fs.fed.us/psw/publications/ziemer/Ziemer92.PDF

Timber Harvest Opposing View #72 - “As conservation-minded scientists with many years of experience in biological sciences and ecology, we are writing to bring your attention to the need to protect our National Forests. Logging our National Forests has not only degraded increasingly rare and valuable habitat, but also numerous other services such as recreation and clean water.”

“Unfortunately, the past emphasis of management has been on logging and the original vision for our National Forests has failed to be fully realized. During the past several decades, our National Forests have suffered from intense commercial logging. Today almost all of our old growth forests are gone and the timber industry has turned our National Forests into a patchwork of clearcuts, logging roads, and devastated habitat.”

“It is now widely recognized that commercial logging has damaged ecosystem health, clean water, and recreational opportunities-- values that are highly appreciated by the American public. The continued logging of our National Forests also wastes American tax dollars and diminishes the possibilities of future economic benefits. The Forest Service and independent economists have estimated that timber accounts for only 2.7 percent of the total values of goods and services derived from the National Forests, while recreation and fish and wildlife produce 84.6 percent.”

From an April 16, 2002 letter to President Bush asking him to stop all logging in the national forests.
http://www.forestwatch.org/content.php?id=108
Note: After the link has been opened, scroll to the bottom and follow the link to “Scientist's No Logging Letter.pdf 64KB” This will show the complete letter and the signatories.

The names of the 221 Ph.D. level scientists that signed the letter are:

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Dr. Eric J. Taylor, Ph.D
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Dr. Andrea S. Thorpe, Ph.D.
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Dr. Daniel M Vernon, Ph.D.
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Dr. Richard A. Wahle, Ph.D.
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Dr. Diana H. Wall, Ph.D.
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Dr. Nickolas M. Waser, Ph.D.
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Dr. Judith S. Weis, Ph.D.
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Dr. John F. Weishampel, Ph.D.
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Dr. Gregory Welch, Ph.D.
University of Maine, Professor Darling Marine Center

Dr. Robert G. Wetzel, Ph.D.
University of Alabama-Tuscaloosa, Department of Biological Sciences, Bishop Professor of Biology

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Dr. Peter S. White, Ph.D.
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Dr. Bill Willers, Ph.D.
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St. Mary's College of Maryland, Department of Biology, Professor of Biology

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Dr. Michael Windelspecht, Ph.D.
Appalachian State University, Department of Biology, Assistant Professor of Biology

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Dr. Marti Witter, Ph.D.

Dr. Helen Young, Ph.D.
Middlebury College, Department of Biology Professor

Dr. Joy B. Zedler, Ph.D.
University of Wisconsin-Madison, Department of Botany and Arboretum, Aldo Leopold Professor of Restoration Ecology

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Dr. Marion Klaus, Ph.D.
Sheridan College

Comment: The Responsible Official ignores the statements of 221 unbiased, highly educated biological scientists who point out the common natural resource degradation resulting from commercial timber sales based on the word of a handful of foresters and silviculturists who will gain personally when the timber sale is sold. Clearly, the Responsible Official prefers to let representatives from resource extraction corporations choose the projects on the forest.

Timber Harvest Opposing View #73 - "Recently, so called "salvage" logging has increased on national forests in response to a timber industry invented "forest health crisis" which points the finger at normal forest processes of fire, fungi, bacteria, insects and other diseases. In fact the crisis in the national forests is habitat destruction caused by too much clearcutting.

My long-term studies of forest diseases in Idaho show the loss by disease and insect activity in all age classes of forests to be less than or slightly more than 1 percent per year over the past thirty-eight years. These findings are consistent with Forest Service national level data.

Forests are structured systems of many life forms interacting in intricate ways and disturbances are essential to their functioning. It's not fire disease fungi bacteria and insects that are threatening the well being of forests. Disease, fire, windthrow, and other disturbances are a natural part of the forest ecosystem and assist in dynamic processes such as succession that are essential to long term ecosystem maintenance. The real threat facing forests are excessive logging, clearcutting and roadbuilding that homogenize and destroy soil, watersheds and biodiversity of native forests."

Partridge, Arthur Ph.D., Statement at a Press Conference with Senator Robert Torricelli about S. 977 and HR 1376), the Act to Save America's Forests
April 28, 1998, U.S. Capitol

http://www.saveamericasforests.org/news/ScientistsStatement.htm

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Timber Harvest Opposing View #74 - "CONCLUSIONS
In our overview of the impacts of forest management activities on soil erosion and productivity, we show that erosion alone is seldom the cause of greatly reduced site productivity. However, erosion, in combination with other site factors, works to degrade productivity on the scale of decades and centuries. Extreme disturbances, such as wildfire or tractor logging, cause the loss of nutrients, mycorrhizae, and organic matter. These combined losses reduce long-term site productivity and may lead to sustained periods of extended erosion that could exacerbate degradation.

Managers should be concerned with harvesting impacts, site preparation disturbances, amount of tree that is removed, and the accumulation of fuel from fire suppression. On erosion-sensitive sites, we need to carefully evaluate such management factors."

Elliot, W.J.; Page-Dumroese, D.; Robichaud, P.R. 1999. *The effects of forest management on erosion and soil productivity.* **Proceedings of the Symposium on Soil Quality and Erosion Interaction,** Keystone, CO, July 7, 1996. Ankeney, IA: Soil and Water Conservation Society. 16 p.
http://forest.moscowfsl.wsu.edu/smp/docs/docs/Elliot_1-57444-100-0.html

Opposing Views Attachment #2

Wildfire is a Natural Disturbance Event that Benefits many Natural Resources in the Forest in Spite of the Fact it Kills Conifer Tree Species

… Yet the Land Management Agencies (US Forest Service and BLM) Continue to Propose Commercial Timber Sales in Post-fire Landscapes Using the Excuse that the Trees Must be Removed before they Rot and become Unmerchantable

Here are the facts that USFS and BLM keep secret from the public:

1) There are countless other natural resources in the forest besides conifer tree species which the agency conveniently ignores.
2) The health of these "other" resources is improved by fire, thus fire improves forest health which is contrary to what the agency claims.
3) Fire that does not threaten homes in the Wildland Urban Interface is a welcome event rather than a "catastrophe" as the agency claims.
4) The real reason the agency is proposing to log the dead and dying trees in the post-fire landscape is to make their timber cut quota and spend their funding earmarked for timber in order to please agency employees at higher levels.
5) Dead and dying trees resulting from wildfire are supposed to rot in order to replenish the organic material in the soil.

Post Wildfire Logging Opposing View #1 - "When we, as scientists, see policies being developed that run counter to the lessons of science, we feel

compelled to speak up. Proposed post-disturbance legislation (specifically the Forest Emergency Recovery and Research Act [HR 4200] and the related Forests for Future Generations Act [S. 2079]), crafted as a response to recent fires and other disturbances, is misguided because it distorts or ignores recent scientific advances."

"Under the labels of "recovery" and "restoration," these bills would speed logging and replanting after natural disturbances. Although logging and replanting may seem like a reasonable way to clean up and restore forests after disturbances like wildland fires, such activity would actually slow the natural recovery of forests and of streams and creatures within them.'

"Many scientist-reviewed studies and syntheses (please see the selected citations appended to this letter) have recently come to this conclusion. For example, no substantive evidence supports the idea that fire-adapted forests might be improved by logging after a fire. In fact, many carefully conducted studies have concluded just the opposite. Most plants and animals in these forests are adapted to periodic fires and other natural disturbances. They have a remarkable way of recovering - literally rising from the ashes - because they have evolved with and even depend upon fire."

"In testimony before the House Subcommittee on Resources (November 10, 2005), eminent forest ecologist and University of Washington Professor Jerry Franklin noted that logging dead trees often has greater negative impacts than logging of live trees. He concluded that "timber salvage is most appropriately viewed as a 'tax' on ecological recovery." Beyond those concerns, post-disturbance logging often intensifies the potential severity of future fires by concentrating the slash from logging at or near the ground. Rather than leaving plant material standing - and providing perching, nesting, and feeding sites for wildlife - such logging abruptly moves the material to the ground. Most of this material would naturally fall to the ground, adding important supplies of nutrients and energy to the forest floor and structure in the form of woody debris to stream channels. But this naturally happens over decades, not in the relatively short time associated with a logging operation."

From an August 1, 2006 letter to members of Congress
http://www.conservationnw.org/library/otherpub/document-2006-03-15-7573536098

The 169 Ph.D. Scientists who signed this letter to Congress are:

Abbott, Isabella A. Ph.D., Paul Alaback, Ph.D., William S. Alverson, Ph.D., Richard F. Ambrose, Ph.D., Loren Ammerman, Ph.D., James P. Amon, Ph.D., Thomas H. Anderson, Ph.D., William D. Anderson, Jr., Ph.D., Robert Angus, Ph.D., Joseph E. Armstrong, Ph.D., Richard G. Baker, Ph. D., Richard H. Baker, Ph.D., William L. Baker, Ph.D., Bruce G. Baldwin, Ph.D., Raymond Barbehenn, Ph.D., Linda Sue Barnes, Ph.D., Frank Barnwell, Ph.D., James Barron, Ph.D., Paul E. Bartelt, Ph.D., Andrew M. Barton, Ph.D., Carol J. Baskauf, Ph.D., Peter Bednekoff Ph. D., Paul Beier, Ph.D., Michael A. Bell, Ph.D., Craig W. Benkman, Ph.D., David H. Benzing, Ph.D., May R. Berenbaum, Ph.D., David J. Berg, Ph.D., Brad Bergstrom, Ph.D., Carolyn Bergstrom, Ph.D., Robert L. Beschta, Ph.D., Alfred Beulig, Ph.D., Charles Birkeland, Ph.D., John G. Bishop, Ph.D., David E. Blockstein, Ph.D., Jessica Blois Ph.D., Michael H. Blust, Ph.D., Jane H. Bock, Ph.D., P. Dee Boersma, Ph.D., Stephanie Bohlman, Ph.D., Stephen K. Boss, Ph.D., Reed Bowman, Ph.D., Richard L. Boyce, Ph.D., David Barton Bray, Ph.D., Richard A. Bradley, Ph.D., Steven W. Brewer, Ph.D., Martin R. Brittan, Ph.D., William R. Bromer, Ph.D., Lincoln P. Brower, Ph.D., David Brown, Ph.D., Greg Brown, Ph.D., Ken Brown, Ph.D., Milford Brown, Ph.D., Deborah Buitron, Ph.D., Abel Bult-Ito, Ph.D., Tom Bultman, Ph.D., Robyn J. Burnham, Ph.D., Ramona J. Butz Ph.D, James Byers, Ph.D., Bernard H. Byrnes, Ph.D., Diane Campbell, Ph.D., Philip D. Cantino, Ph.D., Ken Carloni, Ph.D., John L. Carr, Ph.D., C. Ronald Carroll, Ph.D., Georgia Bobb Carson, Ph.D., Kefyn M. Catley, Ph.D., Christopher Chabot, Ph.D., Kai M. A. Chan, Ph.D., F. Stuart Chapin, III, Ph.D., Robin L. Chazdon, Ph.D., Anita F. Cholewa, Ph.D., David Christophel, Ph.D., Barbara J. Clement, Ph.D., Robert C. Clover, Ph.D., Robert Coats, Ph.D., Coblentz, Ph.D., Martin L. Cody, Ph.D., William J. Cohen, Ph.D., Robert K. Colwell, Ph.D., Marty Condon, Ph.D., Laura E. Conkey, Ph.D., Ian M. Cooke, Ph.D., Clay E. Corbin, Ph.D., John Costello, Ph.D., Bruce C. Cowell, Ph.D., Lance Craighead, Ph.D., T. Patrick Culbert, Ph.D., David A. Culver, Ph.D., Amanda Curtin, Ph.D., Ana Davidson, Ph.D., Paul Dayton, Ph.D., Amrita G. de Soyza, Ph.D., James E. Deacon, Ph.D., D. Robert Deal, Ph.D., Kelly Decker, Ph.D., Kevin J. Delaney, Ph.D., Dominick A. DellaSala, Ph.D., DeLuca, Ph.D., Saara J. DeWalt, Ph.D., David S. Dobkin, Ph.D., Richard J. Douglass, Ph.D., Jean Dubach, Ph.D., Tom Dudley, Ph.D., Scot Duncan, Ph.D., Peter W. Dunwiddie, Ph.D.,Phillip Dustan, Ph.D.,L. L. Eberhardt, Ph.D.,Vincent M. Eckhart, Ph.D., Patrick M. Eggleston, Ph.D., William R. Engels, Ph.D., J.H. Epler, Ph.D., Jonathan P. Evans, Ph.D., Margaret Evans, Ph.D., Douglas Eveleigh, Ph.D., Christopher Farmer, Ph.D., Melissa K. Fierke, Ph.D., Thomas L. Fleischner, Ph.D., Erica Fleishman, Ph.D., R. Wills Flowers, Ph.D., George W. Folkerts, Ph.D., Joseph Fortier, Ph.D., Elizabeth A. Forys, Ph.D, Brian Foster, Ph.D., Lee E. Frelich, Ph.D., Terrence J. Frest, Ph.D., Chris Frissell, Ph.D., Jed Fuhrman, Ph.D., Alder Fuller, Ph.D., George J. Gamboa, Ph.D., Timothy J. Gaudin, Ph.D., Thomas M. Gehring, Ph.D., Donald Geiger, S.M., Ph.D., Bob Gillespie, Ph.D., Frank S. Gilliam, Ph.D., Rosanna Giordano, Ph.D., Travis C. Glenn, Ph.D., Michale Glennon, Ph.D., Enrique Gomezdelcampo, Ph.D., David L. Gorchov, Ph.D., Steven Green, Ph.D., Gary K. Greer, Ph.D., Carole S. Griffiths, Ph.D., John S. Gunn, Ph.D., James Haas, Ph.D., Stacey Halpern, Ph.D., Steven Hamburg, Ph.D., Michael Hamilton, Ph.D., Alexander H. Harcourt, Ph.D., James A. Harding, Ph.D., Annita Harlan, Ph.D., Marilyn M. Harlin,

Ph.D., David D. Hart, Ph.D., John Harte, Ph.D., Mary Ellen Harte, Ph. D., David Hastings, Ph.D., Robert T. Heath, Ph.D., Brooke Parry Hecht, Ph.D., Ken R. Helms, Ph.D., Richard T. Holmes, Ph.D., Marcel Holyoak, Ph.D., Michael H. Horn, Ph.D., Thomas R. Horton, Ph.D., G.F. Hrusa, Ph.D., Robert Huber, Ph.D., Jarvis E. Hudson, Ph.D., Robert M. Hughes, Ph.D., Richard Hutto, Ph.D., G. J. Ikenberry, Ph.D., Timothy Ingalsbee, Ph.D., Haruhiko Itagaki, Ph.D., Daniel H. Janzen, Ph.D., Douglas L. Jeffries, Ph.D., David G. Jenkins, Ph.D., Bart R. Johnson, Ph.D., Laura E. Jones, Ph.D., James R. Karr, Ph.D., Sterling C. Keeley, Ph.D., Barbara A. Knuth, Ph.D., Walter D. Koenig, Ph.D., Sally Gregory Kohlstedt, Ph.D., Loraine U. Kohorn, Ph.D., Julie E. Korb, Ph.D., Fred Kraus, Ph.D., Shawn Kuchta, Ph.D., Melinda Laituri, Ph.D., Rick Landenberger, Ph.D., Patrick Leacock, Ph.D., Christopher A. Lepczyk, Ph.D., Simon Levin, Ph.D., Joyce N. Levine, PhD, William Z. Lidicker, Jr., Ph.D., Gene E. Likens, Ph.D., Creighton M. Litton, Ph.D., Dale R. Lockwood, Ph.D., John P. Loegering, Ph.D., Kathleen LoGiudice, Ph.D., Marilyn D. Loveless, Ph.D., Bruce Lyon, Ph.D., William Mackay, Ph. D., Jason MacKenzie, Ph.D., Julie Maier, Ph.D., Martin B. Main, Ph.D., Julin Maloof, Ph.D., Robert E. Marra, Ph.D., Laura Marx, Ph.D., John M. Marzluff, Ph.D., Glenn Matlack, Ph.D., Brady J. Mattsson, Ph.D., William W. Mautz, Ph.D., Ph.D., Brian McCarthy, Ph.D., Charles A. McClaugherty, Ph.D., Dale A. McCullough, Ph.D., Mara A. McDonald, Ph.D., William H. McDowell, Ph.D., Amy B. McEuen, Ph.D., Daniel J. McGarvey Ph.D., Patrick McGuire, Ph.D., William O. McLarney, Ph.D., K. W. McLeod, Ph.D., Jack D. McMillen, Ph.D., Scott McNaught, Ph.D., Michael J. Medler, Ph.D., Robert J. Meese, Ph.D., Gary K. Meffe, Ph.D., Robert W. Merriam, Ph.D., J.P. Michaud, Ph.D., Anne Millhollen, Ph.D., Arlee Montalvo, Ph.D., Richard R. Montanucci, Ph.D., Peter B. Moyle, Ph.D., P.H. Mulder, Ph.D., Dennis D. Murphy, Ph.D., K. Greg Murray, Ph.D., Michael P. Murray, Ph.D., Philip Myers, Ph.D., Dhruba Naug, Ph.D., William D. Newmark, Ph.D., Barry R. Noon, Ph.D., Elaine Norman, Ph.D., Elliott A. Norse, Ph.D., Gretchen North, Ph.D., Reed Noss, Ph.D., Gary Nuechterlein, Ph.D., Mary O'Brien, Ph.D., Kathleen O'Reilly, Ph.D., Dennis C. Odion, Ph.D., Erin O'Doherty, Ph.D., Richard R. Old, Ph.D., Guy W. Oliver, Ph.D., Gordon H. Orians, Ph.D., John A. Osborne, Ph.D., Richard S. Ostfeld, Ph.D., A. O. Pacheco, Ph.D., Joel E. Pagel, Ph.D., Lydia C. Pan, Ph.D., Michael Parke, Ph.D., Michael S. Parker, Ph.D., David F. Parkhurst, Ph.D., Arthur Dean Partridge, Ph.D. , Gustav Paulay, Ph.D., Timothy A. Pearce, Ph.D., James L. Pease, Ph.D., J. Akers Pence, Ph.D., David Perry, Ph.D., Kimberly A. Peters, Ph.D., F. A. Pinkham, Ph.D., Jay Pitocchelli, Ph.D., J. Dan Pittillo, Ph.D., Mechthild Pohlschroder, Ph.D., Ellen Popodi, Ph.D., Jennifer E. Price, Ph.D., Anne Pusey, Ph.D., Robert Michael Pyle, Ph.D., G. S. Rahi, Ph.D., Jan A. Randall, Ph.D., Brenda Rashleigh, Ph.D., Richard J. Reiner, Ph.D., Karl J. Reinhard, Ph.D., Bradford G. Rence, Ph.D., Ann F. Rhoads, Ph.D., Cecil F. Rich, Ph.D., David I. Richard, Ph.D., Lisa Richardson-Calfee, Ph.D., Dan L. Richter, Ph.D., Brett R. Riddle, Ph.D., Catherine Riseng, Ph.D., David W. Roberts, Ph.D., Carlton L. Rockett, Ph.D., Gary W. Roemer, Ph.D., William Rogers, Ph.D., Sievert Rohwer, Ph.D., Thomas P. Rooney, Ph.D., Stephen T. Ross, Ph.D., John T. Rotenberry, Ph.D., Steve Rothenberger, Ph.D., Betsie B. Rothermel, Ph.D., Stephen I. Rothstein, Ph.D., Barbara A. ("Bitty") Roy, Ph.D., Suzanne M. Royer, Ph.D., Cristina Rumbaitis del Rio, Ph.D., James Runkle, Ph.D., Sam Rushforth, Ph.D., James R. Ruzycki, Ph.D., Carl Safina, Ph.D., D. Scott Samuels, Ph.D., Sahotra Sarkar, Ph.D., Raymond A. Saumure, Ph.D., Melissa Savage, Ph.D.,

John F. Schalles, Ph.D., Joseph R. Schiller, Ph.D., Andrew Schnabel, Ph.D., Tania Schoennagel, Ph.D., Robert L. Schooley, Ph.D., Tim Seastedt, Ph.D., Jack A. Seilheimer, Ph.D., Semken, Ph.D., Ruth G. Shaw, Ph.D., Kathleen L. Shea, Ph.D., Brian R. Shmaefsky, Ph.D., George Sideris, Ph.D., Miles R. Silman, Ph.D., Tony Silvaggio, Ph.D., Rebecca Simmons, Ph.D. Assistant Professor Department of Biology University of Carol Skinner, Ph.D., Diane E. Sklensky, Ph.D., Stephen A. Skrabal, Ph.D., Shawn Smallwood, Ph.D., Bryce E. Smith, Ph.D., David L. Smith, Ph.D., Gerald Smith, Ph.D., Jennifer Smith, Ph.D., Sherilyn G. F. Smith, Ph.D., Erica Smithwick, Ph.D., Paul Sneed, Ph.D., Anthony Snider, Ph.D., Eric B. Snyder, Ph.D., Tex A. Sordahl, Ph.D., Wayne D. Spencer, Ph.D., Timothy P. Spira, Ph.D., James R. Spotila, Ph.D., Richard Steiner, Ph.D., Robert Stiles, Ph.D., Glenn R. Stewart, Ph.D., Paul M. Stewart, Ph.D., Richard Strathmann, Ph.D., James R. Strittholt, Ph.D., Mel Sunquist, Ph.D., Samuel S. Sweet, Ph.D., Michael C. Swift, Ph.D., William A. Szelistowski, Ph.D., Robert Tafanelli, Ph.D., David Tallmon, Ph.D., David Winship Taylor, Ph.D., Stephen T. Tettelbach, Ph.D., Guy A. Thompson, Jr., Ph.D., Tamara Ticktin, Ph.D., Brian N. Tissot, Ph.D., A. Spencer Tomb, Ph.D., David W. Tonkyn, Ph.D., Vicki Tripoli, Ph.D., Stephen C. Trombulak, Ph.D., William J. Trush, Ph.D., Robin Tyser, Ph.D., Michael Van Clef, Ph.D., Thomas T. Veblen, Ph.D., Kristin Vessey, Ph. D., Frank von Hippel, Ph.D., Floyd Waddle, Ph.D., Robert O. Wagner, Ph.D., D. Alexander Wait, Ph.D., Don Waller, Ph.D., B. Michael Walton, Ph.D., Richard T. Ward, Ph.D., James H. Warner, Ph.D., Vicki Watson, Ph.D., Beth Wee, Ph.D., Judith S. Weis, Ph.D., Raymond R. White, Ph.D., Walter G. Whitford, Ph.D., Sue Wick, Ph.D., Jack E. Williams, Ph.D., Jerry Woolpy, Ph.D., J. Timothy Wootton Ph.D., Ruth D. Yanai, Ph.D., and Thomas M. Yuill, Ph.D.

Post Wildfire Logging Opposing View #2 - “This crass timber industry pay-off is being justified as a means to ensure forest health and reduce the threat of forest fires. It will achieve neither. Salvage logging is known to increase erosion, impair streams and other wildlife habitat, further damage forests made more fragile by fires, and can actually increase fire risk due to the buildup of hazardous fuel and slash left by logging operations.

A fire-adapted forest that burns naturally (most are on varying periodicities) and is left to recover is not a disaster - it is how many forests regenerate. Trees downed by forest fires provide habitat for wildlife and nutrients needed for their renewal and to help keep forests healthy. Rarely are

whole forests destroyed - as clumps of live trees and surrounding intact forests provide materials to seed a new, healthier forest."

Barry, Glen Ph.D. ***"Salvage Logging" Threatens Ancient Forest Renewal"***
Forest Conservation News Today, 2004
http://144.16.65.194/hpg/envis/doc99html/biodsal240618.html

Post Wildfire Logging Opposing View #3 - "Notably, the Administration's wildland fire policy does not rely on commercial logging or new road building to reduce fire risks and can be implemented under its current forest and land management polices. The removal of large, merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk. Fire ecologists note that large trees are "insurance for the future – they are critical to ecosystem resilience."[10] Targeting smaller trees and leaving both large trees and snags standing addresses the core of the fuels problem.[11]

The Congressional Research Service (CRS) recently addressed the effect of logging on wildfires in an August 2000 report and found that the current wave of forest fires is not related to a decline in timber harvest on Federal lands. From a quantitative perspective, the CRS study indicates a very weak relationship between acres logged and the extent and severity of forest fires. To the contrary, in the most recent period (1980 through 1999) the data indicate that fewer acres burned in areas where logging activity was limited."

Babbitt, Bruce (DOI Secretary) and Dan Glickman (USDA Secretary)
"**A Report to the President in Response to the Wildfires of 2000**"
September 8, 2000
http://www.forestsandrangelands.gov/reports/documents/2001/8-20-en.pdf

Post Wildfire Logging Opposing View #4 - “Smokey the Bear's "Only you can prevent forest fires" mantra has been a very successful public relations campaign. However well intended, the program was ignorant of fire ecology. The mere possibility that fire has an important positive role in maintaining healthy forests was anathema to and censored by Forest Service leaders. It was only after the conversion of surplus war bombers (B17's and 24's) that fire fighters attacked remote areas-no longer constrained by roads of mule trains. For decades its official policy toward newly ignited fires was "out by 10 a.m. the next day". By an amazing coincidence, the policy ended when Congress repealed the emergency fire suppression fund in the mid-1980s.”

Baden, John A. Ph.D. and Pete Geddes
“**The Political Economy of Wildfires**”
Bozeman Daily Chronicle, June 08, 2000
http://www.free-eco.org/articleDisplay.php?id=33

Post Wildfire Logging Opposing View #5 - “With respect to the need for management treatments after fires, there is generally no need for urgency, nor is there a universal, ecologically-based need to act at all. By acting quickly, we run the risk of creating new problems before we solve the old ones. Ecologically speaking, fires do not require a rapid human response. We should not talk about a "fire crisis" but rather of managing the landscape with the anticipation that fire will eventually occur. Given the high degree of variability and high uncertainty about the impacts of post-fire

responses, a conservative approach is warranted, particularly on sites susceptible to on-site erosion."

Beschta, Robert L. Ph.D., Christopher A. Frissell Ph.D**.,** Robert Gresswell Ph.D.
Richard Hauer Ph.D., James R Karr Ph.D., G. Wayne Minshall Ph.D.
David A. Perry Ph.D. and Jonathan J. Rhodes 1995 "**Wildfire and Salvage Logging**"
http://www.saveamericasforests.org/congress/Fire/Beschta-report.htm

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Post Wildfire Logging Opposing View #6 - "The following practices are generally inconsistent with efforts to restore ecosystem functions after fire: seeding exotic species, livestock grazing, placement of physical structures in and near stream channels, ground-based postfire logging, removal of large trees, and road construction. Practices that adversely affect soil integrity, persistence or recovery of native species, riparian functions, or water quality generally impede ecological recovery after fire."

Beschta, R.L. Ph.D., J.J. Rhodes, J.B. Kauffman Ph.D.
R.E. Gresswell Ph.D., G.W. Minshall Ph.D**.**, J.R. Karr Ph.D.
D.A. Perry Ph.D., F.R. Hauer Ph.D., and C.A. Frissell
2004 "**Postfire Management on Forested Public Lands of the Western United States**"
Conservation Biology 18(4): 957–96
http://www.cababstractsplus.org/abstracts/Abstract.aspx?AcNo=20043157386

Post Wildfire Logging Opposing View #7 - "A recent report released by the American Lands Alliance has questioned whether logging trees in areas that have experienced wildfire is sound forest practice. ALA says in most

cases burned forests should be left to recover naturally to preserve animal habitats, water sources and trees left behind from the fire."

"Foresters, however, believe the benefits of logging burned areas include taking dead trees that would otherwise rot, and careful restoration techniques that are part of after-the-fire logging."

"The report says, "Logging after fires degrades soils, produces sediment endangering aquatic species and water quality, increases fire risks, and destroys terrestrial wildlife habitat. Consequently, logging after fires should not be thought of as restoration." "

Boerger, Paul **"**After the Fire - To log or Not to Log**"**
Mt Shasta Herald, December 2, 2005
http://www.klamathforestalliance.org/Newsarticles/newsarticle20051201.html

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Post Wildfire Logging Opposing View #8 - "But salvage logging is considered to be more damaging than the bushfires. Experts say the forests need time to recover if they are to provide habitat and food sources for the future existence of wildlife."

" "Salvage logging is extremely detrimental," Ms Blair said. "The Government's response is basically anything that didn't burn we're going to log." "

Brooks, Kim **"Logging forcing possum to extinction"**
Reportage, November 2009
http://www.reportage-enviro.com/2009/11/logging-forcing-possum-to-extinction/

Post Wildfire Logging Opposing View #9 - "Following the 2008 California wildfires, the Forest Service has proposed to salvage log across riparian areas – home to several listed fish species – in order to "restore" the forest. Although researchers agree that post-fire salvage logging is a "tax" on the environment, and that unlogged recently burned forests are the rarest ecosystem in the West, the Forest Service nonetheless is proposing to recover the "economic value" of the timber from sensitive riparian areas, despite the lack of demand for wood products from federal public lands.

Specifically, we recently filed a motion for a preliminary injunction to prevent logging of the Panther project, adjacent to the Marble Mountain Wilderness in northern California. The project proposed to salvage log 255 acres of forest that had been affected by the 2008 wildfires. The Forest Service subsequently canceled this timber sale! We are pleased that this sensitive and beautiful area is once again safe from the chainsaws."

Brown, Susan Jane, Attorney
"**Protecting Valuable Post-Fire Ecosystems in California**"
Western Environmental Law Center
http://westernlaw.org/our-work/cases/protecting-valuble-post-fire-ecosystems-in-california

Post Wildfire Logging Opposing View #10 - "In some areas the use of prescribed fire without any "thinning" would be the best restoration method. Indeed, many forests in the West do not require any treatment. These are

forests that for thousands of years have burned at long intervals and only under drought conditions, and have been altered only minimally by 20th century fire suppression. These forests are still "healthy" and thinning would only disturb them, not "restore" them. In short, the variation among our forested landscapes is much too great for one treatment to be appropriate everywhere.

Where thinning is used for restoration purposes in dry forest types, removal of small diameter material is most likely to have a net remedial effect. Brush and small trees, along with fine dead fuels lying atop the forest floor, constitute the most rapidly ignited component of dry forests (young forest stands regenerating after timber harvest often burn with the greatest intensity in western wildfires). They most surely post-date management-induced alteration of dry forest fire regimes. And their removal is not so likely to increase future fire intensity, for example from increased insolation and/or the drying effects of wind."

Christensen, Jr., Norman L. et al.
excerpt from a September 9, 2002 letter to President Bush
http://docs.nrdc.org/land/files/lan_07062801g.pdf

Post Wildfire Logging Opposing View #11 - "Why isn't it true that 'the more wood removed the better'? Why should 'big, old' trees be retained? First, larger-diameter woody materials do not pose a significant threat for wildfire ignition or spread. It is largely the finer fuels (a few inches and less in diameter) that carry fire. More important, large, old trees actually provide protection from fire spread because they are resistant to fire and their shade maintains favorable moisture conditions in the understory fuels. Too much thinning of the forest canopy can produce more rapid drying of such fuels and, thereby, more frequent and severe wildfire risk. Furthermore, big, old trees provide critical habitat and maintain key ecosystem functions."

Christensen, Norman L. Jr., Ph.D., Testimony before
the Senate Committee on Agriculture, Nutrition and Forestry
regarding H.R. 1904—the Healthy Forests Restoration Act of 2003
June 26, 2003
http://wwwpaztcn.wr.usgs.gov/fire/hr_1904_testimony_christensen.pdf

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Post Wildfire Logging Opposing View #12 - "These research conclusions redefine the WUI fire problem as a home ignitability issue largely independent of wildland fuel management issues. Consequently, this description has significant implications for the necessary actions and accompanying economic considerations for fire agencies.

"The congruence of research findings from different analytical methods suggests that home ignitability is the principal cause of home losses during wildland fires. Any WUI home fire loss assessment method that does not account for home ignitability will be critically under specified and likely unreliable. Thus, land classification and mapping related to potential home loss must assess home ignitability."

"As stated, the evidence indicates that home ignitions depend on the home materials and design and only those flammables within a few tens of meters of the home (home ignitability). The wildland fuel characteristics beyond the home site have little if any significance to WUI home fire losses."

"Because homeowners typically assert their authority for the home and its immediate surroundings, the responsibility for effectively reducing home ignitability can only reside with the property owner rather than wildland agencies."

Cohen, Jack D. Ph.D.
USDA Forest Service Gen.Tech.Rep. PSW-GTR-173. 1999
http://www.fs.fed.us/rm/pubs_other/rmrs_1999_cohen_j001.pdf

Post Wildfire Logging Opposing View #13 - "These results suggest that to reduce ignitions, the distances from a structure for managing vegetation are much smaller than the lofting distances for firebrands. Thus, beyond some relatively short distance from the structure (depending on the vegetation and topography), vegetation management has no significant benefit for reducing flame generated ignitions. Vegetation management, on the other hand, cannot be extensive enough, in a practical sense, to significantly reduce firebrand ignitions. Therefore, the structure and its immediate surroundings should be the focus for activities intended for improving ignition risk."

"In high-density residential areas containing highly flammable structures (e.g., residences with flammable roofs), vegetation management may not be sufficient to prevent widespread fire destruction." (pg. 92)

Cohen, Jack D. Ph.D. 2003. "**Structure Ignition Assessment Model (SIAM)**" USDA Forest Service Gen. Tech. Rep. PSW-GTR-158. 1995. http://www.fs.fed.us/psw/publications/documents/psw_gtr158/psw_gtr158_05_cohen.pdf

Post Wildfire Logging Opposing View #14 - "It is a common misconception that a tree that dies in the forest without being harvested is wasted. Nothing could be further from the truth."

“Trees have been dying in forest ecosystems for as long as there have been forests, and the function they perform is critical to maintaining the integrity of those ecosystems.”

“Snags and down logs provide animal and plant habitat; build, diversify, and protect soils and aquatic ecosystems; and provide sites for microbial activity critical to forest productivity. In many cases, fire plays an important role in the creation of dead trees.”

“Logs on the forest floor fulfill a number of functions. Like snags, logs provide important habitat for vertebrates as diverse as salamanders, shrews, and bears. While working as a research biologist, former Forest Service Chief Jack Ward Thomas identified 179 species that use dead wood in the Blue Mountains of northeastern Oregon, amounting to over half of the vertebrate species in the region.

“**Dead Trees and Healthy Forests: Is Fire Always Bad?**”
Wilderness Society Science & Policy Brief, March 2003, Number 3
http://www.wildfirelessons.net/documents/Dead-Trees-and-Healthy-Forests.pdf

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Post Wildfire Logging Opposing View #15 - “Some land managers and forest scientists advocate the widespread use of silvicultural treatments (of which thinning is the most widely proposed harvest-based fuels reduction method) in western roadless areas to reduce fuel loads and tree stocking levels, and thereby decrease the probability of large, intense fires. Although thinning within the context of intensive forestry is not new, its efficacy as a tool for fire hazard reduction at the landscape scale is controversial, largely unsubstantiated, and fundamentally experimental in nature thereby requiring caution particularly when applied across large landscapes.” (FEMAT 1993, Henjum et al. 1994, DellaSala et al. 1995, SNEP 1996, USDA Forest Service 2000)

“There have been only a few empirical studies that have tested the relationship between thinning or fuels treatment and fire behavior on even a limited basis. In spite of hypothesized benefits, these studies, as well as anecdotal information and analysis of recent fires, suggest that thinning treatments have highly variable results. In some instances, thinning treatments intended to reduce fire hazard appear to have the opposite effect (Huff et al. 1995, van Wagtendonk 1996, Weatherspoon 1996). Such treatments may reduce fuel loads, but they also allow more solar radiation and wind to reach the forest floor. The net effect is usually reduced fuel moisture and increased flammability.” (Countryman 1955, Agee 1997)

DellaSala, Dominick A. Ph.D. and Evan Frost. 2001
“**A Comprehensive Strategy for Roadless Area Cconservation and Fuels Reduction in Priority Areas**”
http://www.kettlerange.org/salvagelogging/DellaSala&Frost_Comprehensive_Strategy.html

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Post Wildfire Logging Opposing View #16 - “3. If trees are dead, why not log them anyway?

Dead and dying trees are the vital components of a new forest and are the “food” for regenerating ecosystems. Disturbances like fire often generate a primary source of large dead and downed trees that forests will depend on for decades to centuries. The dying trees still contain seeds that can renew a forest after fire and the large dead and downed trees perform unique ecosystem functions, including preventing erosion by anchoring soils, providing shade and “nurse logs” for seedling establishment, and wildlife and fish habitat for numerous birds, small mammals, bats, and fish, many of which help keep insects in check after a disturbance event. Logging removes these vital ‘legacy’ trees that “lifeboat” a forest through its rejuvenating stages. In congressional testimony to the House Subcommittee on Resources (November 10, 2005), prominent forest ecologist and University of Washington Professor Jerry Franklin said

'*logging large dead trees likely has greater negative impacts on forest ecosystems than even logging green trees*.' "

DellaSala, Dominick A. Ph.D. **"Post-Fire Logging Q & A**"
http://www.nccsp.org/files/Postfire%20Q%20-%20A.pdf

Post Wildfire Logging Opposing View #17 - "While knowledge will never be complete, available information clearly indicates that post-disturbance logging and related activities impede or prevent ecosystem regeneration. Strittholt and Rustigian (2003) examined 23 studies of salvage logging, concluding that there was no scientific evidence to support the claim that such logging benefits forest ecosystem health or promotes late-successional forest characteristics – in fact, most of the scientific papers document damage from this activity. Lindenmayer et al. (2004) raise similar concerns in *Science*, and other scientific syntheses (Karr et al. 2004, Beschta et al. 2004) conclude that post-fire logging can be a significant deterrent to forest regeneration following natural disturbances (Donato et al. 2006). In congressional testimony to the House Subcommittee on Resources (November 10, 2005), prominent forest ecologist and University of Washington Professor Jerry Franklin said '*timber salvage is most appropriately viewed as a tax on ecological recovery. The tax can either be very large or relatively small depending upon the amount of material removed and the logging techniques that are used*.' "

DellaSala, D.A. Ph.D., G. Nagle Ph.D. , R. Fairbanks, D. Odion Ph.D.
J.E. Williams Ph.D., J. R. Karr Ph.D., C. Frissell Ph.D.,
and T. Ingalsbee Ph.D. 2006. "**The facts and myths of post-fire management: a case study of the Biscuit fire, southwest Oregon**"
http://www.nccsp.org/files/Biscuit%20White%20Paper%20-%20January%2010,%202006.pdf

Post Wildfire Logging Opposing View #18 - “post-fire activities most likely to be inconsistent with ecosystem restoration are: seeding non-native species, livestock grazing, installation of instream structures, ground-based logging and soil disruption, removal of large trees, road and landing construction, and logging of ecologically sensitive areas including roadless areas, riparian areas, and areas with moderate to serve burns.”

“in research on post-fire logging on the Winema National Forest (Oregon), Sexton (1998) found that post-fire logged sties produced only about 38% of the understory biomass of unlogged sites and one year later produced only about 27% of understory biomass. Salvaged areas, compared to unsalvaged sites, one and two years later had significantly reduced vegetation biomass, reduced species diversity, reduced species richness, reduced growth of planted seedlings, and reduced survival of planted seedlings.”

DellaSala, Dominick A. Ph.D.
February 2006 “**Post-fire Logging Summary of Key Studies and Findings**”
http://www.nccsp.org/files/Postfire%20Summary%20of%20Key%20Findings.pdf

Post Wildfire Logging Opposing View #19 - “The priority for fuels management should be the wilderness-urban interface (WUI) and municipal watersheds, not fire-burned trees in the backcountry. Points to the need to reintroduce natural fire regimes in wilderness areas. Reducing fuels while destroying soils or watersheds does more harm than good.”

Dr. Dombeck, M.P., Williams, J.E., Wood, C.A., 2004.
"**Wildfire Policy and Public Lands: Integrating Scientific Understanding with Social Concerns across Landscapes**"
Conservation Biology 18(4):883-889.
http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/FireScienceResearch/FireEcology/FireEcology-Dombeck04.pdf

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Post Wildfire Logging Opposing View #20 - "Trees killed by wildfire and left standing take on roles that change the ecological services they previously provided as components of a green-tree system. They still offer some shade, which in a burned environment can slow the heating of surface waters and the soil surface. They may also provide more rapid recruitment of large wood into streams. Decomposing fallen trees provide nutrients, shelter, and early structure for a rejuvenating forest floor."

"Burned forests typically support significantly different bird communities, with many species dependent on stand-replacement fires to maintain their populations across the landscape. Usually there's an increase in cavity-nesting, insectivorous birds such as woodpeckers and certain species of flycatchers."

Duncan, Sally, a Ph.D. candidate
in environmental sciences at Oregon State University.
Published in the October 2002 issue of *Science Findings,*
a publication of the Pacific Northwest Research Station,
USDA Forest Service
http://www.fs.fed.us/pnw/sciencef/scifi47.pdf

Post Wildfire Logging Opposing View #21 - "Summary of Findings: Scientific Review of Fire, Recovery, and Post-Fire Management

- Dead and dying trees provide important ecological functions to natural forest ecosystems.
- Post-fire salvage logging causes many of the same impacts to natural biodiversity as do green tree harvests.
- The elimination of post-fire habitat and regenerative processes by human intervention has made this habitat type rare.
- Any contention that an immediate and aggressive post-fire response is needed to protect forests is unfounded."

"**Ecological Issues Underlying Proposals to Conduct Salvage Logging in Areas Burned by the Biscuit Fire**"
Conservation Biology Institute, January 2004
http://www.consbio.org/what-we-do/ecological-issues-underlying-proposals-to-conduct

Post Wildfire Logging Opposing View #22 - "Fresh, dry slash of any species makes a high-intensity, unapproachable fire. A fire started in dry, fresh slash can become uncontrollable in seconds." (pg.12)

"It appears significant that many large fires in the western United States have burned almost exclusively in slash. Some of these fires have stopped when they reached uncut timber; none has come to attention that started in green timber and stopped when it reached a slash area." (pg. 14)

Fahnestock, G.R. 1968. "**Fire hazard from pre-commercially thinning ponderosa pine**." *Research Paper 57*, USDA, Forest Service.
http://www.fs.fed.us/pnw/pubs/journals/pnw_1968_fahnestock001.pdf

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Post Wildfire Logging Opposing View #23 - "The FEMAT scientists recognized that …

Salvage of dead trees has significant effects on the development of future stands and the suitability as habitat for a number of organisms. Snag removal results in long-term impacts on the forest community because large snags are not produced by the new stand until trees become large and begin to die from natural mortality (often a period of 50-100 years). Snags are used extensively by cavity nesting birds and mammals such as woodpeckers, nuthatches, chickadees, squirrels, red tree voles, and American marten. Removal of snags following disturbance can significantly reduce the carrying capacity of these specie for many years."

FEMAT (1993 page IV-37)
Published in "**Post-Fire Logging Summary of Key Studies and Findings, February 2006"**
http://library.ceres.ca.gov/docs/data/1700/1720/HYPEROCR/hyperocr.html

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Post Wildfire Logging Opposing View #24 - "Although our review under the arbitrary and capricious standard is deferential, it does not condone a "clear error of judgment." Marsh, 490 U.S. at 378 . In this case, the Forest Service made a clear error of judgement in its decision to prepare only an EA for the Big Tower project and in its failure to analyze the combined effects of several salvage sales in the same watershed developed as part of a coordinated fire recovery strategy. Accordingly, we REVERSE and REMAND to the district court with directions that it remand to the Forest Service for further proceedings consistent with this opinion. The injunction issued by this Court on November 5, 1998, as clarified on November 9, 1998, shall remain in full force and effect until the Forest Ser-vice satisfies its NEPA obligations."

Fletcher, Betty B. and A. Wallace Tashima, Circuit Judges
Opinion in ***Blue Mountains* v. *Blackwood*** 161 F.3d 1208, 1214-16 (9th Cir. 1998)
http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=9th&navby=case&no=9835783

Post Wildfire Logging Opposing View #25 - "Black-backed Woodpeckers' strong affinity for stands of dead trees makes their population vulnerable to excessive post-fire salvage logging and other management
activities that might reduce the number of recently killed trees across the Sierra landscape. (Pg. 8)

"IBP scientists are engaged in pioneering research on the impacts of wildfire on Spotted Owls. Severe fire is often viewed as a major threat to the species, but our Sierra Nevada field studies revealed that Spotted Owls whose territories had recently burned in mixed-severity fires preferentially foraged in high-severity burn patches (*see figure, right*), and appeared able to thrive in partially burned landscapes, at least in the initial
years after wildfire. These results have important implications for post-fire timber salvage projects, and more generally, for the management of recently burned forest stands throughout the Sierra Nevada." (Pg. 8)

"**Forest Birds and Wildfire in the Sierra Nevada**"
The Institute for Bird Populations *2009 Annual Report*
http://www.birdpop.org/DownloadDocuments/2009_annual_report.pdf

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Post Wildfire Logging Opposing View #26 - "Finally, as mentioned above, wildfires can also generate benefits. Many plants regrow quickly following wildfires, because fire converts organic matter to available mineral nutrients. Some plant species, such as aspen and especially many native perennial grasses, also regrow from root systems that are rarely damaged by wildfire. Other plant species, such as lodgepole pine and jack pine, have evolved to depend on stand replacement fires for their regeneration; fire is required to open their cones and spread their seeds. One author identified research reporting various significant ecosystems threatened by fire exclusion — including aspen, whitebark pine, and Ponderosa pine (western montane ecosystems), longleaf pine, pitch pine, and oak savannah (southern and eastern ecosystems), and the tallgrass prairie. [57] Other researchers found that, of the 146 rare, threatened, or endangered plants in the coterminous 48 states for which there is conclusive information on fire effects, 135 species (92%) benefit from fire or are found in fire-adapted ecosystems." [58]

"Animals, as well as plants, can benefit from fire. Some individual animals may be killed, especially by catastrophic fires, but populations and communities are rarely threatened. Many species are attracted to burned areas following fires — some even during or immediately after the fire. Species can be attracted by the newly available minerals or the reduced vegetation allowing them to see and catch prey. Others are attracted in the weeks to months (even a few years) following, to the new plant growth (including fresh and available seeds and berries), for insects and other prey, or for habitat (e.g., snags for woodpeckers and other cavity nesters). A few may be highly dependent on fire; the endangered Kirtland's warbler, for example, only nests under young jack pine that was regenerated by fire,

because only fire-regenerated jack pine stands are dense enough to protect the nestlings from predators."

"**Forest Fire/Wildfire Protection**"
CRS Report for Congress
February 14, 2005
http://www.coloradofirecamp.com/congressional_research/forest-fire-wildfire-effects.htm

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Post Wildfire Logging Opposing View #27 - "Undisturbed patches can amplify the diversity of the entire post-fire landscape. Over many years, repeated fires may burn in similar patterns in specific places leading to long-term varied distribution of species, organic matter, wetlands, etc."

Foster, D.R.; Knight, D.H.; and J.F. Franklin. 1998.
"**Landscape Patterns and Legacies Resulting from Large Infrequent Forest Disturbances**"
Ecosystems 1: 497-510.
http://www.jstor.org/pss/3658751

Post Wildfire Logging Opposing View #28 - "One indirect consequence of natural disturbance and pest and pathogen outbreaks that is often overlooked is that salvage or preemptive harvesting may affect a larger area or create a greater impact on forest ecosystems than the disturbance itself (Frothingham 1924; Irland 1998; Radeloff et al. 2000)." (Pg 966)

"Many decisions to harvest before or after a disturbance or to attempt to increase forest resistance or resilience to disturbance and stress are based

on the incorrect notion that forest ecosystems are damaged, destroyed, or impaired following major disturbance and that this situation should be avoided or remediated (Maloney 2005).” (Pp. 966 and 967)

“Although intuitive support exists for the development of “protection forests” through silvicultural approaches to increase the resistance and resilience of forests to pests, pathogens, and natural disturbances, empirical data to support the approach are lacking. Not only is there sparse evidence that such approaches achieve their goals of increasing resistance and resilience, little evidence suggests that natural disturbances yield negative functional consequences. Therefore, current management regimes aiming to increase long-term forest health and water quality are ongoing “experiments” lacking controls. In many situations good evidence from true experiments and “natural experiments” suggests that the best management approach is to do nothing.” (Pg. 968)

Foster, David R., Ph.D. and David A. Orwig Ph.D. “**Preemptive and Salvage Harvesting of New England Forests: When Doing Nothing Is a Viable Alternative**”
Conservation Biology, Volume 20, No. 4, August 2006
http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/SalvageLoggingScience/Salvage-Foster06.pdf

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Post Wildfire Logging Opposing View #29 - “We question the assumption that canopy fuel reduction through commercial thinning is necessary or sufficient for reducing wildfire hazards and/or introducing prescribed fire. We cite evidence that logging-induced changes in fuel composition, vegetation, and microclimate can result in increased rate of fire spread, higher fireline intensity, and more severe fire effects. This, in turn, can affect firefighter safety and efficiency, and inflate suppression costs. Instead, treatment of surface and ladder fuels through prescribed fire combined with manual pre-treatments (for example, non-commercial thinning, pruning, and hand-piling) can effectively reduce the risk of

crownfires, increase firefighter safety, and improve ecosystem health. These methods also promise employment opportunities for wildland firefighters."

Fox, Joseph W., Ph.D. and Timothy Ingalsbee, Ph.D.
"**Fuel Reduction for Firefighter Safety**." Published in the Proceedings of the International Wildland Fire Safety Summit Winthrop, WA, Oct. 26-29, 1998.
http://www.fire-ecology.org/research/fuel_reduction.htm

Post Wildfire Logging Opposing View #30 - "Natural forest disturbances, including fire, kill trees but remove very little of the total organic matter. Combustion rarely consumes more than 10 to 15 percent of the organic matter, even in stand-replacement fires, and often much less. Consequently, much of the forest remains in the form of live trees, standing dead trees, and logs on the ground. Also, many plants and animals typically survive such disturbances. This includes living trees, individually and in patches.

These surviving elements are biological legacies passed from the predisturbance ecosystem to the regenerating ecosystem that comes after. Biological legacies are crucial for ecological recovery. They may serve as lifeboats for many species, provide seed and other inocula, and enrich the structure of the regenerated forest. Large old trees, snags, and logs are critical wildlife habitat and, once removed, take a very long time to replace.

Management of postburn areas, including timber salvage, needs to incorporate the concept of biological legacies. Salvaging dead and damaged trees from burns involves the ecology of a place, not simply economics and fuels. In addition to effects on postfire wildlife habitat, there are also effects of salvage logging on soils, sediments, water quality, and aquatic organisms. Significant scientific information exists on this topic as well as on biological legacies."

“Management of postburn areas, including timber salvage, needs to incorporate the concept of biological legacies. Salvaging dead and damaged trees from burns involves the ecology of a place, not simply economics and fuels. In addition to effects on postfire wildlife habitat, there are also effects of salvage logging on soils, sediments, water quality, and aquatic organisms. Significant scientific information exists on this topic as well as on biological legacies. Biological legacies differ by orders of magnitude in natural forests, a fact that should guide restoration programs. Where stand-replacement fires are characteristic, such as with lodgepole pine and Pacific Coast Douglas fir forests, massive areas of standing dead and down trees are usual; salvage operations generally are not needed and do not contribute to ecological recovery, even though they do provide economic return.”

Franklin, J.F. Ph.D., and J. Agee Ph.D. 2003
“**Forging a Science-Based National Forest Fire Policy**”
Issues in Science and Technology Online. Fall 2003.
http://inr.oregonstate.edu/atthecrossroads/download/franklin_agee.pdf

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Post Wildfire Logging Opposing View #31 - “Types and amounts of biological legacies persisting on impacted sites are probably the most important variable in assessing the actual ecological impacts of a disturbance because of their important roles in recovery. The most conspicuous and among the most important of the biological legacies are the surviving live trees, standing dead trees (snags), and logs and other woody debris on the forest floor and in the streams. The living trees, snags, and logs play critical roles in lifeboating many animal, plant, fungal, and microbial organisms, such as by providing essential habitat (e.g., places to live and hide) and keeping the microclimate of the disturbed site within acceptable levels. The trees, snags, and logs also greatly enrich the structure of the young forest as it develops, increasing diversity and rate at

which species that have been displaced and which need structural complexity--such as Northern Spotted Owls--can return to the site."

"In conclusion, the scientific lessons regarding biological legacies and the importance of retaining snags, logs, and other woody debris are being applied in regular timber harvesting practices (i.e., structural retention) but have not yet been fully incorporated into restoration policy. Timber salvage may be carried out for economic reasons. However, timber salvage will rarely achieve any positive ecological benefit as has been pointed out in a recent article in Science (Lindenmayer et al. 2004)."

Franklin, Jerry F. Ph.D. Statement submitted for the record
to the House Subcommittee on Forests and Forest Health
July 15, 2004
http://ftp.resource.org/gpo.gov/hearings/108h/94996.txt

Post Wildfire Logging Opposing View #32 - "Research had documented that, in some situations, wildfires brought ecological benefits to the burned areas — aiding regeneration of native flora, improving the habitat of native fauna, and reducing infestations of pests and of exotic and invasive species." (pg 2)

Gorte, Ross W. Ph.D., Specialist in Natural Resources Policy
Resources, Science, and Industry Division
CRS Report for Congress, January 18, 2006
http://www.ncseonline.org/nle/crsreports/06Feb/RL30755.pdf

Post Wildfire Logging Opposing View #33 - "Ecologists and fire experts unanimously agree that fire has served an essential role in certain ecosystems for millennia. The ecological benefits of fire include: the creation of critical wildlife habitat in standing dead trees, increased nutrients and productivity in soil systems when burned material decomposes, improved conditions for surviving old growth trees when a surface fire moves through a system, and the regeneration of some fire dependent trees like lodgepole pine (Pinus contorta). Fire also increases availability of other fundamental building blocks of ecosystems such as moisture and sunshine by opening up the canopy and returning nutrients to the soil. Natural fire cycles maintain the diversity of habitats available to all the species in the ecosystem, from wildlife to wildflowers to fungi."

Gregory, Lisa Dale Ph.D.
"**Wildland Fire Use: An Essential Fire Management Tool**"
A Wilderness Society Policy and Science Brief
December 2004
http://wilderness.org/Library/Documents/upload/ScienceBrief-WildlandFireUseEssentialTool.pdf

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Post Wildfire Logging Opposing View #34 - "It has been shown that salvage logging reduces the species richness and abundance of the boreal plant community. These effects were noticed across all burn severities but were the most prominent in the moderate burn sites. Salvage logging these areas tends to create longer lasting effects on the successional growth. This is a concern as forest managers target these sites as the main areas for salvage as they are the most valuable for the production of pulp and saw timber (Pshebnicki per. comm. 2004).")Pg. 108)

Guedo, Dustin C. 2007 "**The Effects of Fire and Salvage Logging on Early Post-Fire Succession in Mixedwood Boreal Forest Communities of Saskatchewan**"
http://library2.usask.ca/theses/available/etd-09122007-165113/unrestricted/guedo_d.pdf

Post Wildfire Logging Opposing View #35 - "Fire is a natural process in the boreal forest. The plants and the animals rely on fire to maintain a natural balance of vegetation and wildlife abundance. Without habitat mosaics created by fire throughout the boreal forest, many species would not exist."

Haggstrom, Dale A and Thomas F. Paragi, Wildlife Biologists
With the Alaska Dept. of Fish and Game
http://wildlife.alaska.gov/index.cfm?adfg=fire.fire5

Post Wildfire Logging Opposing View #37 - "Native species have evolved with fire over millennia in western forests, and many depend upon post-fire habitat. Interestingly, some of the highest levels of native biodiversity among animals and higher plants are found in unlogged forested areas that have burned at high severity (Noss and others 2006, Frontiers in Ecology and Environment, Vol. 4).

It's important for people to know the facts about fire, ecosystems, and climate. Unfortunately, the timber industry is less interested in the truth than it is in misleading people to serve its own economic goals."

Hanson, Chad T. Ph.D. "**Logging Industry Misleads on Climate and Forest Fires**"
NewWest, July 11, 2008
http://www.newwest.net/topic/article/logging_industry_misleads_on_climate_and_forest_fires/C41/L41/

Post Wildfire Logging Opposing View #38 - "Logistic regression modeling in the northern Rocky Mountains, based upon nesting presence or absence, found nest-site selection for Black-backed Woodpeckers to be strongly associated with high density of small snags within 11.3 m of the nest tree (Saab et al. 2002, 2004). This has led some land managers to conclude that a high-quality Black-backed Woodpecker territory consists of dense stands of small, young fire-killed trees. The results of our study, however, indicate why it is important to distinguish nest-site characteristics from foraging habitat (Hutto 2006). The Black-backed Woodpecker did not forage in the high severity and logged condition, despite high densities of small snags."

Hanson, Chad T. Ph.D. and Malcolm P. North Ph.D., "**Postfire Woodpecker Foraging in Salvage-Logged and Unlogged Forests of the Sierra Nevada**" *The Condor*, Vol. 110, Number 4, pages 777-782, October 2008
http://www.plantsciences.ucdavis.edu/affiliates/north/Publications/Postfire%20woodpecker%20foraging%20Hanson%20North%20Condor.pdf

Post Wildfire Logging Opposing View #39 - "It may seem counterintuitive, but the scientific evidence is telling us that some of the very best and richest wildlife habitat in western U.S. forests occurs where fire kills most or all of the trees. These areas are relatively rare on the landscape, and the many wildlife species that depend upon the habitat

created by high-intensity fire are threatened by fire suppression and post-fire logging."

"Specifically, the report (available at www.johnmuirproject.org) finds:

Patches of high-intensity fire (where most or all trees are killed) support among the highest levels of wildlife diversity of any forest type in the western U.S., and many wildlife species depend upon such habitat. Post-fire logging and ongoing fire suppression policies are threatening these species."

Hanson, Chad Ph.D. February 2, 2010
"**New Report Debunks Myth of 'Catastrophic Wildfire'** "
http://johnmuirproject.org/documents/Myth%20of%20Catastrophic%20Wildfire%20Media%20Release.pdf

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Post Wildfire Logging Opposing View #40 - "Personally, I've come to think we need to change our thinking on salvage logging. There are other values in the forest. In fact, a burned area is probably the most sensitive place you could be working in. The public really hasn't caught on to this yet. People still want to get the cut, get the trees they see as wasting away. They want the economic value. We talk about forest restoration after a fire, but it just got restored. That's what fire does. We know that, but we can't seem to get the message out. Until you start thinking like a black-backed woodpecker, you just ain't going to get it."

Hutto, Richard L. Ph.D.
"**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**"
By Michael Jamison of the *Missoulian*, August 11, 2005.
http://www.missoulian.com/lifestyles/recreation/article_285770c7-1611-56bd-9b5a-db855da65841.html

Post Wildfire Logging Opposing View #41 - "We need to change our thinking when it comes to logging after forest fires. There is potential economic value in the timber, yes, but there are numerous other values in a burned forest. And the prospect of losing those values must be weighed against the potential gain that may accompany post-fire timber harvest. The scientific facts also reveal that burned areas are probably the most ecologically sensitive places from which we might extract trees."

Hutto, Richard Ph.D. "**Post-fire logging is bad for forests and wildlife**"
Seattle Times, December 8, 2005
http://community.seattletimes.nwsource.com/archive/?date=20051208&slug=burnedforests08

Post Wildfire Logging Opposing View #42 - "We investigated the effects of postfire salvage logging on cavity-nesting birds by comparing nest densities and patterns of nest reuse over a three-year period in seven logged and eight unlogged patches of mixed-conifer forest in the Blackfoot-Clearwater Wildlife Management Area, Montana. We found 563 active nests of 18 cavity-nesting birds; all species were found nesting in the uncut burned forest plots, but only eight nested in the salvage-logged plots. All except one species nested at a higher density in the unlogged areas, and half of the species were significantly more abundant in the unlogged plots. Every timber-drilling and timber-gleaning species was less abundant in the salvage-logged plots, including two of the most fire-dependent species in the northern Rocky Mountains—American Three-toed (*Picoides dorsalis*)

and Black-backed (*P. arcticus*) Woodpeckers. Lower abundances in salvage-logged plots occurred despite the fact that there were still more potential nest snags per hectare than the recommended minimum number needed to support maximum densities of primary cavity-nesters, which suggests that reduced woodpecker densities are more related to a reduction in food (wood-boring beetle larvae) than to nest-site availability. Because cavities were present in only four of 244 randomly selected trees, and because frequency of cavity reuse by secondary cavity-nesters was higher in salvage-logged than in unlogged plots, nest-site limitation may be a more important constraint for secondary cavity-nesters in salvage-logged areas. These results suggest that typical salvage logging operations are incompatible with the maintenance of endemic levels of most cavity-nesting bird populations, especially populations of primary cavity-nesting species."

Hutto, Richard J. Ph.D. and Susan M. Gallo **"The Effects of Postfire Salvage Logging on Cavity Nesting Birds**"
The Condor 108(4):817-831. 2006
http://www.bioone.org/doi/abs/10.1650/0010-5422(2006)108%5B817:TEOPSL%5D2.0.CO%3B2

Post Wildfire Logging Opposing View #43 - "With respect to birds, the effects of postfire salvage harvesting are uniformly negative. In fact, most timber-drilling and timber-gleaning bird species disappear altogether if a forest is salvage-logged. Therefore, such places are arguably the last places we should be going for our wood."

Hutto, Richard L. Ph.D. "**The Ecology of Severely Burned Forests**"
Counterpunch, July 19 / 20, 2008
http://www.counterpunch.org/hutto07192008.html

Post Wildfire Logging Opposing View #44 - “Logging after the Biscuit fire, the study found, has harmed forest recovery and increased fire risk. What the short study did not say -- but what many critics of the Bush administration are reading into it -- is that the White House has ignored science to please the timber industry. The study is consistent with research findings from around the world that have documented how salvage logging can strip burned forests of the biological diversity that fire and natural recovery help protect.”

“**In Fire's Wake, Logging Study Inflames Debate**”
Washington Post, February 27, 2006
http://www.washingtonpost.com/wp-dyn/content/article/2006/02/26/AR2006022601287.html

Post Wildfire Logging Opposing View #45 - “Given the NWFP's declared "open season" on salvage logging in Reserves, one can easily imagine timber-starved foresters praying for storms to come and sow the seeds of their future harvests. It is almost as if the agency has evolved into a kind of timber vulture, waiting ever so impatiently for trees to succumb to the elements before moving in for the feast. Some of the agency's timber sale clientele, though, may not be so willing to wait patiently for "acts of God" to create salvage opportunities. Large-scale wildfire disturbances have increasingly abnormal causes in Cascadia, these days. Incidents of arson attacks against public forests have been steadily rising ever since the first "spotted owl" restrictions on commercial logging. It does not take a rocket scientist to predict that arson attacks on Reserves will continue to increase

as means of generating new salvage sales. The NWFP has given the prescription for arson fires: they must be a minimum of 10 acres in size in order to be salvageable. Essentially, then, all the scientific analysis and forest protection measures in the NWFP can be vetoed with the strike of an arsonist's match."

Ingalsbee, Timothy, Ph.D. "**Looking Past the Salvage Rider, Forward to Post-Rider Salvage**"
Published in "Wildfire!: an endangered ecosystem process." Vol. 2, Cascadia Fire Ecology Education Project, 1997
http://fireecology.org/research/post_rider_salvage.htm

Post Wildfire Logging Opposing View #46 - "Fire-created snags and logs serve many vital ecological functions for forest soils, streams, vegetation, and wildlife. Large-diameter snags and logs can also help mitigate conditions that lead to high-intensity fires, and aid post-fire natural recovery processes. Conversely, commercially extracting fire-killed trees via salvage logging causes significant short- and long-term adverse effects on forest ecosystem structures, functions and processes. Considering the wide array of vital ecological services that snags and logs provide, the term "salvage" is appropriate only for logging operations in which the primary management objective is extraction of commodity timber values at the expense of other economic and ecological values. Given these environmental impacts and ecological tradeoffs, the claim that salvage logging is a valid tool for forest recovery, rehabilitation, or restoration must be challenged. The more scientists learn about the ecological values of large fire-killed snags and logs, the more clear it becomes that "salvaging" burned trees is scuttling forest ecosystems."

Ingalsbee, Timothy Ph.D., 2003 "**Salvaging Timber; Scuttling Forests**"
http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/SalvageLoggingScience/Salvage-Ingalsbee.pdf

Post Wildfire Logging Opposing View #47 - "Although logging and replanting may seem like a reasonable way to clean up and restore forests after disturbances like wildland fires, such activity would actually slow the natural recovery of forests and of streams and creatures within them. Many scientist-reviewed studies and syntheses (please see the selected citations appended to this letter) have recently come to this conclusion. For example, no substantive evidence supports the idea that fire-adapted forests might be improved by logging after a fire. In fact, many carefully conducted studies have concluded just the opposite. Most plants and animals in these forests are adapted to periodic fires and other natural disturbances. They have a remarkable way of recovering-literally rising from the ashes because they have evolved with and even depend upon fire."

Karr, James R. Ph.D., Reed Noss, Ph.D., Jon Rhodes,
Tania Schoennagel, Ph.D., Dominick A. DellaSala, Ph.D.
A 2004 letter to Congress regarding HR4200
http://www.nccsp.org/files/HR%204200%20Scientist%20Letter.pdf

Post Wildfire Logging Opposing View #48 - "Recent changes in the forest policies, regulations, and laws affecting public lands encourage postfire salvage logging, an activity that all too often delays or prevents recovery."

“Postfire salvage logging generally damages soils by compacting them, by removing vital organic material, and by increasing the amount and duration of topsoil erosion and runoff (Kattleman 1996), which in turn harms aquatic ecosystems. The potential for damage to soil and water resources is especially severe when ground-based machinery is used.” (Pg. 1,029)

“Postfire salvage logging has numerous ecological ramifications. The removal of burned trees that provide shade may hamper tree regeneration, especially on high-elevation or dry sites (Perry et al. 1989). The loss of future soil organic matter is likely to translate into soils that are less able to hold moisture (Jenny 1980), with implications for soil biota, plant growth (Rose et al. 2001, Brown et al. 2003), and stream flow (Waring and Schlesinger 1985). Logging and associated roads carry a high risk of spreading nonindigenous, weedy species (CWWR 1996, Beschta et al. 2004).” (Pg. 1,029)

Karr,James R Ph.D., Johnathan J. Rhodes. G. Wayne Minshall Ph.D.
F. Richard Hauer Ph.D., Robert L. Beschta Ph.D., Christopher A. Frissell
and David A. Perry Ph.D. “**The Effects of Postfire Salvage Logging on Aquatic Ecosystems in the American West**”
Bioscience, November 2004 / Vol. 54 No. 11
http://www.earthjustice.org/library/reports/the-effects-of-positive-salvage-logging.pdf

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Post Wildfire Logging Opposing View #49 - “Local scientists and activists have also done an excellent job of monitoring the negative impacts of the Biscuit logging and providing the public and the media with graphic photos, which, to even a casual observer, clearly demonstrates that post-fire industrial logging has absolutely nothing to do with forest restoration or recovery.”

Koehler, Matthew “**Does Post-Fire Logging make Ecological or Economic Sense?**”
Counterpunch, January 21 / 22, 2006
http://www.counterpunch.org/koehler01212006.html

Post Wildfire Logging Opposing View #50 - “While the logging industry, Bush administration - and apparently the Missoulian - believe that post-fire salvage logging has an insignificant ecological impact and plays a beneficial role in the recovery of burned forests, the best available science confirms that post-fire salvage logging is one of the most ecologically-destructive forms of commercial logging.”

“Let's not forget that salvage logging can also harm fish and wildlife species. In fact, at least 62 species of birds and mammals use burned, diseased or otherwise "defective" trees because these trees provide them with ideal habitat. One particularly important bird species, which researchers have found prefers unlogged burned forests, is the black backed woodpecker. These woodpeckers feed almost exclusively on the larvae of wood-boring beetles and may consume over 13,000 annually, helping to naturally control the spread of insects.”

Kreilick, Jake 2003 “**Post-Fire Salvage Logging is Not Restoration**”
http://www.nativeforest.org/campaigns/wildfire_info_center/post_fire_9_7_03.htm

Post Wildfire Logging Opposing View #51 - “Overall, our results showed that salvage logging significantly alters forest structure, tree regeneration, and understory plant community composition and diversity as compared to unsalvaged post-wildfire stands. Some of these effects were still evident 34 years after salvage logging.” (Pg. 10)

“Salvaged stands also do not host the same understory communities that are found in unsalvaged wildfire stands in the early post-disturbance period. This creates some concern that in the long term, extensive post-fire salvage logging could lead to substantial declines in abundance of plant species which are specialists for early post-fire conditions of mesic stands. Additionally, over time, salvage logging could result in increased populations of introduced and weedy species.” (Pg. 10)

Kurulok, Stephanie Ph.D. and Ellen Macdonald, Ellen Ph.D.
“**Impacts of post-burn salvage logging on plant biodiversity and tree regeneration of the mixedwood boreal forests of Alberta**”
http://www.sfmnetwork.ca/docs/e/PR_200304macdonaldeimpa7.pdf

Post Wildfire Logging Opposing View #52 - “Salvage logging and replanting will convert a structurally complex landscape into a simplified and biologically depraved landscape. Unsalvaged, naturally regenerated, young stands are one of the rarest forest types in the Pacific northwest, and their biodiversity rivals that of old-growth forests. Indeed, naturally developed early successional forest habitats, with their rich array of snags and logs and nonarborescent vegetation, are probably the scarcest habitat in the current regional [Pacific Northwest] landscape.”

Lindenmayer, D.L., D. Perry Ph.D., and J.F. Franklin Ph.D. 2002.
“**Conserving Forest Biodiversity: A Comprehensive Multiscale Approach**” Island Press. Washington, DC: 69.
http://search.barnesandnoble.com/Conserving-Forest-Biodiversity/David-B-Lindenmayer/e/9781559639347

Post Wildfire Logging Opposing View #53 - "[N]atural disturbances are key ecosystem processes rather than ecological disasters that require human repair. Recent ecological paradigms emphasize the dynamic, nonequilibrial nature of ecological systems in which disturbance is a normal feature and how natural disturbance regimes and the maintenance of biodiversity and productivity are interrelated."

"[R]emoval of large quantities of biological legacies can have negative impacts on many taxa. For example, salvage harvesting removes critical habitat for species, such as cavity-nesting mammals, [and] woodpeckers. Large-scale salvage harvesting is often begun soon after a wildfire, when resource managers make decisions rapidly, with long lasting ecological consequences…."

Lindenmayer, D.B. Ph.D. and Reed F. Noss Ph.D.,
"**Salvage Logging, Ecosystem Processes, and Biodiversity Conservation**"
Conservation Biology Volume 20, No. 4, August 2006
http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/SalvageLoggingScience/Salvage-Lindenmayer06.pdf

Post Wildfire Logging Opposing View #54 - "Fire releases nutrients and uncovers bare soil. The blackened, bare soil warms quickly, which stimulates soil microbial activity, nutrient cycling, and plant growth. In forests, fire opens up part of the canopy to sunlight, which allows sun-loving plant species to recolonize the site. In prairies, fire can remove dead

vegetation that hinders new growth, reduce invasive plants, encourage native species, and create wildlife habitat."

"Following fires, plant communities go through successional changes. Many native wildlife species and popular game species, such as bobwhite quail, white-tailed deer, and wild turkey, are dependent on periodic fire to create and maintain suitable habitat. Surface fires can stimulate the growth of herbaceous foods for deer, elk, moose, and hares, and can enhance berry production for black bears and other wildlife. Small mammal populations generally increase in response to new vegetation growth, providing a food source for carnivores. Fire can also reduce internal and external parasites on wildlife." (pg. 2)

"natural disturbance such as fires, floods, and herbivory are critical in maintaining valuable ecosystem functions and creating and restoring wildlife habitat." (pg. 7)

Marks, Raissa Wildlife Habitat Council
Fish and Wildlife Habitat Management Leaflet number 37
Published by the Natural Resources Conservation Service, USDA, April 2006
ftp://ftp-fc.sc.egov.usda.gov/NHQ/ecs/Wild/ImportofDisturbInHabMgt.pdf

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Post Wildfire Logging Opposing View #55 - "Fires can have substantial and seemingly negative effects on streams, particularly smaller streams. Fires may affect the delivery of sediment, the availability of woody debris and other organic materials, and the cycling of nutrients. While fires rarely kill fish outright, fires may directly affect the food chains that ultimately support the fish. Most importantly, fires can sometimes radically accelerate the delivery of sediment to stream channels which -- if compounded by management -- can produce chronic and substantial loss of in-channel habitat, and seriously delay the biological recovery of the stream.

However, viewed at the right scale of time and space, fires are not disasters for streams, indeed fires can induce natural ecological changes that benefit streams and the species that depend on them. The natural recovery of streams after fires can result in improved fish habitat if we do not interfere with the natural recovery processes that initiate themselves soon after the fires are gone. Fire-killed trees are a vital part of both watershed and stream recovery, providing part of the natural environment of the reseeding and vegetative recovery of the watershed, and providing vital stabilizing structure in stream channels and floodplains. If fire-killed trees are logged out of the watershed, these functions, among others, are lost for decades, even centuries."

Minshall, G. Wayne Ph.D., James R. Karr Ph.D.
Judy L. Meyer Ph.D., Christopher A. Frissell Ph.D. and Jack A. Stanford
From a letter to President Clinton
September 19, 1994
http://www.saveamericasforests.org/congress/Fire/Scientists-Anti-Salvage%20Logging-1992.htm

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Post Wildfire Logging Opposing View #56 - "As you know, a forest is composed of more than just trees, it also includes the rivers, streams, lakes, wetlands, and the biological, physical, and chemical processes and ecological functions that link all these pieces together. All these parts and the way that they fit together and the interactions among them constitute the integrity of the ecosystem. It is the maintenance of this integrity that must guide the way we manage forests so that they benefit this and future generations."

"There is a widespread, but incorrect, assumption that dead or so-called rotting trees provide no ecological value if left in place."

"Burned dead and dying trees are important to the ecological integrity of the forests and streams and serve an important function in the post-fire

recovery of these ecosystems. Their indiscriminate or overzealous removal can significantly impede recovery."

Minshall, Wayne Ph.D.
Testimony at the oversight hearings
Before the Task Force on salvage timber and forest health
of the Committee on Resources, House of Representatives (pg. 89)
October 1995
http://www.archive.org/stream/salvagetimberfor01unit/salvagetimberfor01unit_djvu.txt

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Post Wildfire Logging Opposing View #57 - "However, it is know that virtually all forms of postfire logging can have various adverse effects on stream ecosystems (e.g., Mehahan, 1983; Smith et al., 1993a, b; Stout et al., 1993; Ketcheson and Megahan, 1996)."

"In addition, fire lines should be obliterated prior to logging, and road construction or other major ground-disturbing activities should be avoided in order to prevent additional runoff and erosion. Salvage harvest yields responses (e.g., ground disturbance, woody debris removal, interruption of normal infiltration pathways, and acceleration of surface flows) that interact with the direct and indirect effects of fire to make these actions so potentially damaging. In addition, the negative effects extend many years beyond the actual time of salvage activities because of the harvest of snags that normally fall and become incorporated into stream channels and forest floors over several decades or more (Lyon, 1984). These wood inputs are important to create habitat, increase nutrients, and retard runoff and channel alteration during what is normally the most critical stage of stream and riparian vegetation recovery (Minshall et al., 1989; Lawrence and Minshall, 1994)."

Minshall, G.W. Ph.D., "**Responses of stream benthic macroinvertebrates to fir**"
Forest Ecology and Management, 178 (2003) 155–161
http://www.famu.org/mayfly/pubs/pub_m/pubminshallg2003p155.pdf

Post Wildfire Logging Opposing View #58 - "Second, post-fire (salvage) logging does not contribute to ecological recovery; rather, it negatively affects recovery processes, with the intensity of impacts depending upon the nature of the logging activity (Lindenmayer *et al*. 2004). Post-fire logging in naturally disturbed forest landscapes generally has no direct ecological benefits and many potential negative impacts (Beschta *et al*. 2004; Donato *et al*. 2006; Lindenmayer and Noss 2006). Trees that survive fire for even a short time are critical as seed sources and as habitat that sustains biodiversity both above- and belowground."

Noss, Reed F. Ph.D., Jerry F Franklin Ph.D., William L Baker Ph.D.,
Tania Schoennagel Ph.D., and Peter B Moyle Ph.D.
"**Managing fire-prone forests in the US**"
The Ecological Society of America, 2006
http://plantbio.berkeley.edu/~bruns/espm134/papers/Noss.2006.pdf

Post Wildfire Logging Opposing View #59 - "The wildland fires of 2000, 2002, and 2003 created many opportunities to conduct post-fire logging operations in the Inland Northwest. Relatively little information is available on the impact of post-fire logging on long-term soil productivity or on the best method for monitoring these changes."

"Our results indicate that post-fire logging during the summer creates more detrimental disturbance (50% of the stands) than winter harvesting (0% of

the stands). In addition, on the sites we sampled, equipment type (tractor - forwarder - rubber-tired skidder) also influenced the amount of detrimental disturbance."

Page-Dumroese, Deborah Ph.D., Martin Jurgensen Ph.D.; Ann Abbott, Tom Rice Ph.D. Joanne Tirocke, Sue Farley, Sharon DeHart. 2006.
"**Monitoring Changes in Soil Quality from Post-fire Logging in the Inland Northwest**"
In: Andrews, Patricia L.; Butler, Bret W., comps. 2006. *Fuels Management-How to Measure Success*: Conference Proceedings. 28-30 March 2006 Portland, OR. Proceedings RMRS-P-41. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 605-614.
http://www.treesearch.fs.fed.us/pubs/25982

Post Wildfire Logging Opposing View #60 - "Rather, as I see it, legislation should focus on enabling those who live in or near woodlands to protect themselves, as my family and I have for more than half a century without federal intervention or pork-barreling. The U.S.D.A. Forest Service currently is not directed to work with individuals to enable protecting individual properties. This can be changed immediately with little or no additional costs and with considerable positive impact on those of us who live in the woods."

"The "fire protection zone" around dwellings is a mere 150-200 feet. This is the only place where removing flammable material, such as weeds, brush, shrubs, etc. will help in "fire-proofing" buildings in forest fire prone areas. Logging in forests beyond this narrow area will not reduce fires, it will only increase them."

Partridge, Arthur Ph.D. **"Forest Fires, the Correct Way to Protect Buildings From Fire Damage, and How Legislation In Congress Which Claims to Reduce Fires and Fire Damage Will Achieve the Opposite Effect"**
Testimony to the Agriculture, Nutrition and

Forestry Committee, United State Senate
June 26, 2003
http://www.saveamericasforests.org/congress/Fire/PartridgeSenate03.htm

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Post Wildfire Logging Opposing View #61 - "Can salvage timber sales be compatible with ecosystem-based management? Our findings suggest that this type of harvesting is not compatible with contemporary ecosystem-based management. Ecosystem-based management would emphasize removing smaller green trees with greater attention to prevention of mortality rather than removal of large dead trees."

"The authors start off the discussion by saying 'They (salvage harvest timber sales) can be (compatible with ecosystem base management), but much depends on the types of stand structures that are harvested.' Most of the discussion in this section is in reference to other than post-fire salvage. The authors do go on to suggest that 'Salvage harvest methods in burned areas will also need to consider minimizing surface soil disturbance and reducing road-related sediment problems.' These concepts were taken into consideration in the development of the WFR project design. Specifically, in reference to the type of stand structure that is harvested, the project design includes a series of salvage units adjacent to untreated corridors and drainages creating a mosaic of salvage and no-salvage logged areas. Within the salvage units, a proportion of the dead trees larger than 14″ as well as the majority of the dead trees less than 14″ will be left standing." (Pgs. 103 and 104)

Quigley, Thomas M. Ph.D., tech. ed. 1996; "**The Interior Columbia Basin Ecosystem Management Project: Scientific Assessment**."
Gen. Tech. Rep. PNW-GTR-382; Page 178.
Published in Post-Fire Logging Summary of Key
Studies and Findings, February 2006
http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/36016_FSPLT1_014160.pdf

Post Wildfire Logging Opposing View #62 - "The potential effects of postfire logging in riparian areas depend on the landscape context and disturbance history of a site; however, available evidence suggests two key management implications: (1) fire in riparian areas creates conditions that may not require intervention to sustain the long-term productivity of the aquatic network and (2) protection of burned riparian areas gives priority to what is left rather than what is removed."

Reeves, G. H. Ph.D., P. A. Bisson Ph.D., B. E. Rieman Ph.D., and L. E. Benda Ph.D. 2006. "**Postfire logging in riparian areas**"
All of the authors are researchers for the USFS
Conservation Biology. Volume 20, Number 4, Pages 994-1004.
http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/SalvageLoggingScience/Salvage-Reeves06.pdf

Post Wildfire Logging Opposing View #63 - "Disturbances, from windthrown trees to fires, are natural in forests and are essential for forest ecosystem well being. For example, fire is a disturbance in forests, but it is also beneficial. While disturbances kill some individuals, they also open up ecological living space for recolonization by many previously excluded species.

Without fire, natural succession is upset. In a forest where fire has been unnaturally suppressed for many years (50 or more), fire intolerant trees grow unchecked, suppressing and outcompeting the normally dominant fire

resistant trees. Overall biodiversity is reduced. As the tree diversity declines, the habitat becomes unsuitable for a large portion of the forest species. Animal species are lost, since the animals use the fire tolerant variety of tree species for food, shelter and nest sites.

Clearcutting is not ecologically equivalent to fire, and it does not mimic the beneficial effects of fire. We need large tracts of unfragmented forests so that fires can return as a normal part of the overall forest ecosystem. If fire is unnaturally suppressed, a Southeastern longleaf pine savannah is transformed into an oak-hickory forest. The most famous fire dependent species of the longleaf pine ecosystem is the Red Cockaded Woodpecker. In order to nest and reproduce, it needs the tall, old, isolated pines which have survived repeated fires. Without fire, the Red Cockaded Woodpecker will go extinct.

Scientific understanding of forest ecosystems has advanced tremendously since the establishment of the national forests. The Act to Save America's Forests would harmonize federal forest management with these new understandings, and would restore and maintain dynamic living ecosystems with native plants and animals for the long term benefit of future generations of Americans."

Reice, Seth, Ph.D., Associate Professor of Biology
in the Department of Biology and Curriculum in Ecology
University of North Carolina.
Dr. Reice has over 20 years of research experience
in forest watershed ecology and disturbance regimes.
from a press conference with Senator Robert Torricelli, April 28, 1998,
http://www.saveamericasforests.org/news/ScientistsStatement.htm

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Post Wildfire Logging Opposing View #64 - "Expedited logging after forest fires may harm forests, according to nearly 170 scientists responding to efforts in the U.S. Congress to pass the Forest Emergency Recovery and Research Act. The issue of salvage logging was highlighted by a

forum in Washington, D.C. this month, during which the impacts of logging in a forest following fires or other natural events were discussed, including the role these events play in maintaining wildlife and "healthy" forests."

"A burned area may be the most ecologically sensitive place for logging, said Dr. Richard Hutto, professor and director of the Avian Science Center at the University of Montana. "We talk about forest restoration after a fire, but it just got restored by fire itself," he said. "That's what fire does."

"**Scientists: Salvage logging following a forest fire hinders recovery, restoration**"
Cyberwest, March 26, 2006
http://www.cyberwest.com/forest-ecology/post-forest-fire-salvage-logging.shtml

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Post Wildfire Logging Opposing View #65 - "Post-fire logging causes extreme damage and often irrecoverable loss of sensitive forest soils, pollutes watersheds, destroys wildlife habitat, reduces natural regeneration, kills or damages surviving vegetation, creates a myriad of future restoration costs, and increases fuel hazards and wildfire risks.

Although post-fire logging is often billed as a restoration or hazardous fuels reduction management practice, credible scientific evidence suggested the contrary. There is little evidence in the scientific literature to support claims that post-fire logging is necessary for restoration. However, there is ample research, including research reviewed by the U.S. Forest Service *(see McIver and Starr, 2000),* which concludes that post-fire logging itself may actually increase the rate of spread, intensity, and severity of fires."

Sequoia ForestKeeper, "**Post-fire**
Logging in America's National Forests"
Media Tip Sheet, November 2003
http://www.nativeforest.org/pdf/SALVAGE_REPORT_FOR_WEB.pdf

Post Wildfire Logging Opposing View #66 - “Suspended sediment concentrations were 6-times higher in burned watersheds and 11-times higher in post-fire salvage logged watersheds than in unburned watersheds. Sediment availability was greater in both burned and post-fire salvage logged watersheds but varied with flow condition; particularly during the snowmelt freshet and stormflow. In burned watersheds, sediment yield was 5-times higher during snowmelt and 13-times higher during stormflow than in unburned watersheds. Post-fire salvage logging produced much greater impacts than wildfire alone, with mean sediment yield 19-times higher during snowmelt and 9-times higher during stormflow compared to unburned watersheds.”

Silins, Uldis Ph.D., Michael Stone Ph.D., Monica Emelko Ph.D.
and Kevin Bladon Ph.D. “**Sediment Dynamics in Changing Environments**”
From the proceedings of a symposium held in Christchurch, New Zealand
December 2008). IAHS, Publ. 325, 2008, 510-515.
http://iahs.info/redbooks/a325/iahs_325_0510.pdf

Post Wildfire Logging Opposing View #67 - “One of the authors of the Northwest Forest Plan, Jerry Franklin, said, "Salvage logging of large snags and down boles does not contribute to recovery of late-successional (older forests) forest habitat; in fact, the only activity more antithetical to the recovery process would be removal of surviving green trees from burned sites."

forests cannot be "engineered" through salvage logging and tree farming without significantly affecting biodiversity and increasing the risk of fire.

Naturally recovering post-fire landscapes are some of the most fragile and rare ecosystems in the Northwest. While Mother Nature can certainly use a boost in some places through tree thinning in plantations and carefully managed prescribed fire, salvage logging and widespread tree farming are anything but a post-fire remedy. The reality is salvage logging has nothing to do with ecological recovery and is purely an economic activity."

Strittholt, James Ph.D. and Dominick DellaSala Ph.D.
"**Salvage logging has no environmental benefits**"
Published in the Corvallis Gazette Times, April 13, 2004
http://consbio.org/press-room/press-clips/salvage-logging-has-no-environmental-benefits

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Post Wildfire Logging Opposing View #68 - "The new study is part of a growing body of literature that questions the ecological value of post-fire logging. Dominick DellaSala, a forest ecologist with the World Wildlife Fund, says that there is an emerging consensus among scientists that logging burned areas can exacerbate soil damage and erosion, harm waterways, increase fire danger, and hinder natural forest recovery by killing seedlings. More importantly, it removes the big dead trees that contribute to habitat diversity and critical forest processes such as nutrient cycling."

"**Study questions value of post-fire logging**"
High Country News, February 6, 2006
http://www.hcn.org/issues/315/16079

Post Wildfire Logging Opposing View #69 - “Ecological benefits of fire

- Promotes flowering of herbaceous species and fruit production of woody species.
- Improves nutritional quality of plants for both wild and domestic animals.
- Enhances nutrient cycling of some elements and elevates soil pH.
- Maintains required habitat conditions for fire-adapted plant and animal species.
- Results in a more heterogenous and diverse habitat--if natural fires are patchy--leaving pockets of unburned areas.
- Prohibits wildfire conditions from developing (i.e., vast accumulation of highly-flammable, dead vegetation.)”

Tanner, G.W. Ph.D., W.R. Marion Ph.D., and J.J. Mullahey Ph.D.
“**Understanding Fire: Nature's Land Management Tool**”
A Florida Cooperative Extension Service publication, July, 1991
http://edis.ifas.ufl.edu/UW124

Post Wildfire Logging Opposing View #70 - "On March 24, 2006, the Ninth Circuit Court of Appeals temporarily enjoined two post-fire timber projects in the El Dorado National Forest. ***Earth Island Inst. v. United States Forest Serv.,*** --F.3d--, 2006 WL 767012 (9th Cir. 2006). The Court scolded the U.S. Forest Service (USFS), opining that the government appeared more interested in allowing timber harvesting to proceed than thoroughly reviewing their environmental impacts. *Id.* at ** 26-27."

Till, Dustin, "**Ninth Circuit Burns Forest Service over Post-Fire Timber Salvage Projects**"
Marten Law, April 5, 2006
http://www.martenlaw.com/news/?20060405-timber-salvage

Post Wildfire Logging Opposing View #71 - "The new studies provide the first "real, direct data'" showing that more forests burned historically, creating more post-fire forest habitat, said Chad Hanson, a forest ecologist and director of the John Muir Project who is helping lead the listing effort and suing the Forest Service to block post-fire logging in woodpecker habitat near Lake Tahoe.

"It indicates the woodpeckers had more habitat historically than they do now,'" Hanson said.

Williams said when he started the study he had "the same general ideas most people have — that the forests were less dense and there were frequent, less severe fires to maintain that structure."

Now, he believes thinning and post-fire salvage operations should be re-examined and emphasis placed on maintaining high-density stands in certain circumstances that would not threaten people or homes.

“We shouldn’t be managing just for low-density forests,” he said. “We should not be unhappy with — or perhaps even manage for — higher severity fires in the forests.” “

“The Forest Service did not immediately respond to a request for comment.”

Sonner, Scott AP, “**Study challenges views about Western forest fires**”
Published in the *Daily World,* July 23, 2012
http://www.thedailyworld.com/sections/newswire/northwest/study-challenges-views-about-western-forest-fires.html

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Post Wildfire Logging Opposing View #72 - “Salvage logging typically delays or prevents natural recovery in several important ways (Karr 2004)1. Soils are damaged by compaction and removal of vital organic material. This increases the amount of erosion and runoff leading to more turbidity and sediment deposition in streams, which reduces habitat quality for fish and other aquatic species, as well as requiring more water treatment to meet state drinking water standards.”

“Karr concludes that for forest and aquatic ecosystem health, large and old trees ought to be retained. In addition to providing habitat for many species, they reduce soil erosion and aid soil formation. Karr also states, "[N]o logging should be done on moderately and severely burned areas and on other sites prone to soil damage and excessive sedimentation." Much of the Lockheed Fire terrain is steep and burned at moderate and high intensity.”

Frediani, Jodi, “**Post-fire Salvage Logging Good for the Forest?**”
A publication of the Trees Foundation, August 11, 2011
http://www.treesfoundation.org/publications/article-460

Post Wildfire Logging Opposing View #73 - "In *Earth Island Institute v. Forest Service* (2003), and again in an identically titled 2006 case, the Ninth Circuit heard arguments concerning post-fire timber sales in Northern California's Eldorado National Forest. In both cases, the Ninth Circuit determined that the district courts improperly denied preliminary injunctions because the plaintiffs would likely succeed on the merits of their claims alleging that the U.S. Forest Service failed to comply with various provisions of the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA). In concurring opinions in both cases, Judge Noonan suggested that the U.S. Forest Service may be disqualified as a decision maker in post-fire logging issues given the agency's financial interest in such sales. That proposition, grounded in Fifth Amendment procedural due process principles, casts doubt on the Forest Service's capacity to act neutrally where it stands to gain off-budget revenue from so-called "salvage" sales."

"Post-fire timber sales are an acute illustration of the skewed incentives driving Forest Service timber sales generally. As the revenue from traditional timber sales has declined, post-fire timber sales offer a new way to substantially augment the Forest Service budget. While the agency's extractive bent is likely due to a variety of factors apart from financial incentives,[346] the ability to derive off-budget revenue from timber sales is undeniably enticing. While the procedural due process principles Judge Noonan espoused in his *Earth Island I* and *Earth Island II* concurrences cannot gain traction without a liberty or property interest, those terms are not stagnant. Just as the rise of welfare benefits and other government entitlements programs wrought a fresh conception of property in *Goldberg*, so might future courts come to recognize the moral frailty of current entitlements doctrine. A stilted view of liberty and property should not cripple the right to a neutral decision maker in post-fire logging adjudications."

Saylor, Austin, "**The Quick and the Dead: Earth Island v. Forest Service and the Risk of Forest Service Financial Bias in Post-Fire Logging Adjudication**"
Published in Lewis & Clark Law School's *Environmental Law Online, 2012*
http://www.elawreview.org/elaw/373/the_quick_and_the_dead_earth_i.html