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Photo by Rolf Skar.


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Letter from the Director

Every year, thousands of acres of our national forests are logged to produce furniture, wood pallets, and disposable paper products. Ancient trees are falling from the Siskiyous of Oregon to the Appalachians of Virginia. Countless timber sales are damaging habitat for endangered species, such as the Spotted owl and the Indiana bat. And special places near and dear to the hearts of thousands no longer stand peaceful in their majestic beauty. The laws that provide mechanisms to ensure protection for our forests are continually under fire.

We must fundamentally alter the sourcing of wood from these forests and shift companies toward a greater reliance on recycled, certified sustainable lumber, or non-wood alternatives. With less than 2% of our nation's wood supply coming from national forests, we simply do not need to log our remaining wildlands when viable alternatives exist.

Fortunately, grassroots activism is no longer restricted to the forest or the courtroom. More and more forest protection happens at the market-level where endangered forests end up on company shelves. Campaigns to change corporate behavior — or market campaigns — are one of the most effective tools available to forest protection advocates.

As you read *America's Endangered National Forests: Lumber, Landfill, or Living Legacy?*, you will learn about the most endangered national forests in the country. The National Forest Protection Alliance (NFPA) received 22 nominations from forest protection organizations. From those nominations, we selected eleven endangered, two special mentions, and nine threatened forests. What makes the information in this report so unique is that it is compiled by grassroots groups and citizen activists — the people who are on the front lines of logging, energy development, and other resource conflicts.

Nominees provided NFPA with biogeographic descriptions of each forest, cited key management issues and threats, and assessed nine criteria: water quality, road densities, forest practices, timber sale volume and economics, forest health and post-fire logging projects, invasive species, endangered and threatened forests, and the percentage of old-growth and roadless areas. This year, we also included an analysis of the marketplace for wood products on national forests and a list of the top purchasers of federal timber sales.

We hope this report inspires you to become more active by educating a wide range of people — your family and friends, local business leaders and elected officials and, most importantly, other consumers who have the power to choose whether their wood products come from one of our imperiled forests or from a sustainable source. So please contact us to learn how to get involved in our endangered forests project. Indeed, your efforts may ultimately decide the fate of national forests: *Lumber, Landfill, or Living Legacy?*

For the forests,

Susan Curry
Executive Director

The National Forest Protection Alliance (NFPA) is a network of 135 member organizations united to protect and to restore national forests. Founded in 1999, NFPA was established by grassroots groups and citizens to confront the numerous threats to our national forest lands. Our growing network is composed of some of the active groups and dedicated activists from around the country who have experience and success in protecting their national forests and who want to be part of a coordinated movement that is democratic, empowering and effective.

NFPA protest rally of the Biscuit logging project at Siskiyou National Forest headquarters in Grant's Pass, Oregon on October 4th, 2004. Photo by Rolf Skar.

Executive Summary

While the U.S. Forest Service (USFS) celebrates its centennial in 2005, fundamental shifts in how our society relates to national forests offer hope for both the agency and the 192 million acre system it manages. However, to borrow a notable philosophical expression, the more things change, the more things stay the same. Despite shifts in the economic marketplace, growing environmental awareness, and changing social attitudes, logging and other resource extraction policies have not been adjusted to reflect 21st Century realities.

The foresight of the enduring visionaries who worked to create a reserve of federally protected forests is astounding, particularly given the significant increase in the national forest system's ecological and economic value since their inception 100 years ago. Much of the increase in economic value can be attributed to an increased level of residential and commercial development in the U.S. Yet now, trade liberalization, which results in an increase in imports to the U.S., and particularly increased production from private forestlands, where 73% of commercial forests are held, are key factors that are reducing pressure to log national forests.

America's Endangered National Forests: Lumber, Landfill or Living Legacy? gives the reader an informative account of the important socio-economic benefits and uses that intact national forests provide—to say nothing of their irreplaceable ecological values. Given the significant value of these ecosystem services, and the fact that logging on national forests accounts for only 2% of U.S. wood supply, the National Forest Protection Alliance (NFPA) believes that industrial logging on national forests is no longer justified or needed.

As in NFPA's previous endangered forests publications, this report delivers in-depth, on-the-ground profiles of some of the country's most endangered national forests and provides an ecological status report of the current state of the national forest system. *Lumber, Landfill, or Living Legacy?* also analyzes the market pressure to log national forests and demonstrates how consumers may ultimately decide the fate of our remaining wildlands. Beyond the focus on the current marketplace for wood products from national forests, major findings include:

The Bush Administration rule changes to eliminate and ease environmental regulations have translated into a 300 million board feet increase in the logging program (60,000 log trucks stretching for over 500 miles). Illustrative of these changes, Oregon is once again setting the logging pace by targeting its remaining old-growth forests. The USFS cites fire risk reduction and forest health as the primary management rationales. Due to their importance, the report features three Oregon forests. Despite noticeable gains in protection over the past five years, logging on eastern national forests continues to rise, as demonstrated in the profiles of the Allegheny, George Washington & Jefferson, Daniel Boone, and Mississippi National Forests.

Energy development for coal, oil, natural gas, and coalbed methane gas remains unchecked on a handful of national forests and a growing problem on many others. The Allegheny, Los Padres, Huron-Manistee and Carson National Forests are some of the largest national forest producers of oil, natural gas, and coalbed methane gas, respectively. The new forest plan for the Jefferson opens up 72% of the forest to natural gas leasing. In addition, coal mining is a major threat on the Daniel Boone and Wayne National Forests.

Other prominent issues include threats to roadless areas from logging and road building, the proliferation of off-road recreational vehicles (ORVs), and urban encroachment and development which jeopardize many national forests. Currently, in the Bighorn, Tongass, Siskiyou, Los Padres and George Washington & Jefferson National Forests, roadless areas are at risk. The widespread and often illegal use of ORVs contributes to the spread of invasive species and adversely impacts almost every forest that is featured in the report. Meanwhile urban encroachment and transportation development are major issues on the Black Hills, Daniel Boone and George Washington & Jefferson National Forests. And finally, ski area development and other impacts from recreational activities pose serious threats to the Rio Grande, Bitterroot and Nantahala National Forests.

Photo by Steve Krichbaum.

The Market for National Forest Wood Products:

Going, Going, Gone?

—H. John Talberth & Jake Kreilick

As the United States Forest Service (USFS) enters its second century, many citizens question whether the agency still has a role to play in the marketplace for wood and paper products. While timber production from national forests has varied, national forests have historically played a minor role in U.S. wood product markets. The market share of national forest wood products will likely remain near its current level – at just 2% of the U.S. total. Given the economic value of ecosystem services that intact forests provide – and the fact that the timber sale program relies on generous subsidies from U.S. taxpayers – the sustainability of the timber sale program is called into question. After reviewing the importance of the program and its ecological footprint, as best demonstrated in the profiles highlighted in this report, citizens must now ask: Should the government be in the business of selling trees?

A Historical Look at National Forest Timber Production

Throughout the United States, the USFS manages 192 million acres of forest and grasslands. Of this, roughly 97 million acres are considered productive timberland, or forest that is capable of producing more than 20 cubic feet of commercial wood per acre annually. These lands produce seven major categories of raw wood products that are processed into a wide variety of end use products. (For more information on national forest wood products, see sidebar.) Although timber production from national forests has at times been substantial, historically, national forests have played a minor role in U.S. wood product markets.

Between its inception and World War II, the USFS largely promoted a conservation ethic and was known for its exceptional stewardship of the national forest reserves. After 1945, a post-war housing boom increased U.S. demand for wood products beyond what private forestlands could provide and the timber industry began to lobby Congress for more access to public forests. During this period, a new model of industrial forestry took hold and the USFS shifted its management emphasis away from resource stewardship (managing forests for wildlife, water, and public recreation) toward industrial-scale wood production.

Throughout the following decades, timber removal from national forests steadily increased. Despite the passage of the Multiple Use and Sustained Yield Act of 1960, which attempted to codify that other forest resources, such as wildlife, recreation, and water, were as important as timber, the timber industry continued to clearcut and build more roads. In the early 1970s, President Nixon's pro-timber policies heightened the problem, calling for timber production to increase by 50% and for the number of permanent miles of road on the national forests to double. During this period, the USFS permitted the logging of the last sizeable areas of old-growth forest left in the U.S. By the late 1980s, timber removal from the national forests reached an all time high of 12.6 billion board feet (BBF). Yet even at its peak in 1986, the volume of wood products removed from national forest lands accounted for just 14% of the U.S. total. Ten years later, that share had dropped to 6% and today this figure hovers around 2%.

National forests are a refuge for wildlife, such as this Pine marten. Photo by Wilderness Classroom Organization.

Hovering At Two Percent: The Market Share of National Forest Wood Products

A number of factors make it likely that the market share will remain near its present level. First, national forests represent just 19% of the timberland area in the United States, creating a natural limit on the size of the market share for national forest wood products. Second, it is expensive to bring national forest wood products to market because national forest timberland is steeper and less accessible than timberlands managed by industry, private landowners, or other public agencies. National forests are also less productive than private forests. When these forests were established back in the 1890s, almost all of the highly productive and commercially valuable timberland was already in the private domain.

Not only is it costly to bring these products to market, but less expensive alternatives — in the form of cheap imports — are more readily available. As in any industry, the high-cost supplier is in a precarious position. Declining prices or the entry of lower cost producers can significantly reduce demand for a high cost supplier's product. In the case of U.S. timber markets, one of the most important changes over the past two decades has been the enormous influx of inexpensive wood products from abroad, first from Canada and now increasingly from Europe and South America. The influx is a direct result of trade liberalization policies.

In 2004, the U.S. imported nearly 21 BBF from Canada, 2 BBF from Europe, and 1 BBF from South America. In contrast, the 2004 yield from national forests was just 2 BBF. The illustration in Figure 1 points to the insignificance of the national forest logging program from a consumption standpoint. In the future, the share of domestic wood products consumption met by international suppliers is expected to rise from 20% to 26%. If globalization continues to lower trade barriers to inexpensive,

imported wood products and if the U.S. dollar remains strong (imports are relatively cheaper with a strong dollar), it is likely that international competition will help keep the national forest logging program in check — at least for wood products that the U.S. does not hold an export advantage.

Another factor that makes it likely that the market share will remain low concerns the quality of wood products, which has declined markedly in recent years. In the late 1980s, the composition of wood products offered for sale from national forest lands was dominated by fine-grained, old-growth timber, largely from western states. Since 1990, national forest timber sales increasingly have been dominated by small diameter trees and dead trees removed by salvage operations. With less demand for such products, the value of national forest timber sales has plummeted. It is now common practice for the timber industry to not bid on national forest timber sale offerings. This forces the USFS to either lower the price even further below current market value or drop the sales altogether.

And last — and perhaps most importantly — it is increasingly apparent that national forests are far more valuable from an economic standpoint standing than they are cut down.

Economic Value of Intact Forests

National forests, as natural ecosystems, provide an enormous social and economic contribution to the nation in the form of non-timber forest products, clean water, hunting and fishing opportunities, flood control, and recreation. The value of these ecosystem services dwarfs the value of wood products. And because national forests are the only forestlands where such services can be reliably protected, such services will grow more and more valuable as the nation grows.

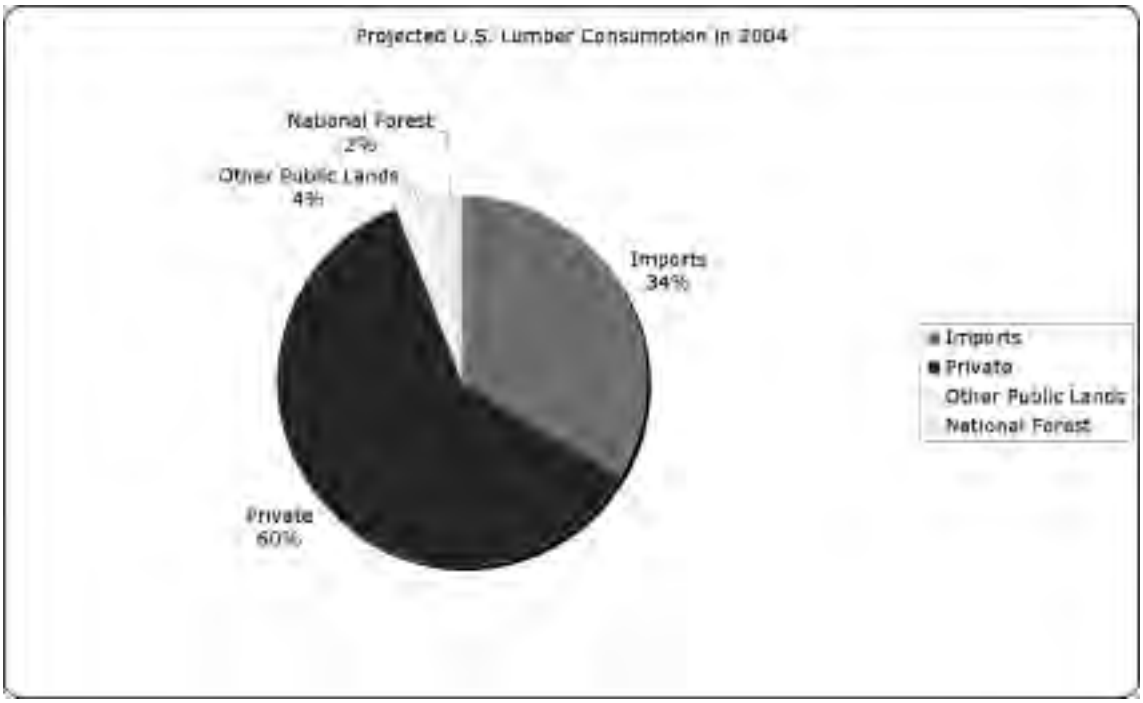
Currently, recreation and tourism, commercial and recreational fisheries, hunting, water and other non-timber uses are more economically and socially significant than the logging program. The economic value of recreation alone increases every year and is currently at $11 billion, according to a recent USFS study. The value of water on national forests lands is at least $3.7 billion annually, a figure that does not include the value of maintaining fish species or the savings to municipalities who have reduced filtration costs because national forest waters are so clean. In contrast, the value of timber produced by the national forest system in 2004 was just $218 million.

In 1999 the Committee of Scientists, an advisory committee formed to provide scientific and technical advice to the USFS regarding improvements to the National Forest System Land and Resource Management planning process, recognized that the national forests will be increasingly called upon to provide the backbone of regional conservation strategies for native species. Ironically, despite the shrinkage of the timber sale program, most sales are still located in the most sensitive areas — critical wildlife habitat, old-growth, roadless areas, or maturing native forests that are recovering from logging. The externalized costs of lost ecosystem services from these sensitive areas are ignored in timber sale decisions.

Taken together, these factors — the natural limit on national forestland share, the cost to bring national forest wood products to market, and the economic value of ecosystem services — all contribute to the trend illustrated in Figure 2, which shows that national forest timber sale volume and timber sale value have rapidly declined over the past ten years. Not only has the economic value of national forest wood products greatly diminished in most cases, but taxpayer expenditures for the timber program have substantially increased. Given these facts, one is left to wonder: What keeps the timber sale program alive?

What Keeps the Timber Sale Program Alive? Your Tax Dollars at Work

In order to better assess the importance of the federal tim-



Your tax dollars at work: roadside logging of the Siskiyou National Forest. Photo by Rolf Skar.

ber sale program, it is necessary to look at both supply side and demand side factors that impact the program. And there are supply-side factors at work that keep the national forest logging program alive — namely, subsidies.

Most Americans are unaware that the federal timber sale program remains competitive because of generous subsidies. Subsidies take the form of taxpayer dollars appropriated from Congress to plan and administer timber sales, replant and restore clearcuts, provide credits to the timber companies that build logging roads, and expenditures designed to enhance the productivity of timberlands, such as pre-commercial thinning.

According to the report, *Ending Timber Sales on National Forests: The Facts (FY 97)*, which was published by the John Muir Project and verified by the Congressional Research Service, the timber sale program's receipts and expenditures in 1997 amounted to a net loss of $1.2 billion to U.S. taxpayers. And it is likely that this cash loss figure is conservative because several costs that are associated with logging, such as disaster relief appropriations for flooding and resulting mudslides, were not included. Typically, such costs are excluded because the USFS has not devised an accurate or reliable means of estimating these unforeseen costs.

Profiled in this report as one of NFPA's most endangered forests, the Tongass National Forest (TNF) provides the best case study in subsidies. Over the last 40 years, the TNF's timber sale program has consistently lost more money than any other national forest. According to the USFS, the TNF lost $35 million in 2001 alone. And since 1982, American taxpayers have spent $1 billion subsidizing the timber industry to clearcut much of the Tongass. During this period, it cost U.S. taxpayers $150,000 for each mile of road built in the forest.

The passage of the Healthy Forest Initiative (HFI) has caused subsidies to significantly increase. The HFI allocated $800 million to directly subsidize small diameter timber sales, ostensibly designed to improve forest health or reduce fire risk. A significant portion of this material may simply be given away to logging companies through stewardship contracting and other mechanisms. Coupled with the recent deregulation of procedures to prepare and analyze the environmental impacts of fuel reduction and salvage timber sales, these subsidies may create enough certainty over future supplies to induce major new investments in mills that can use this material throughout the West, such as Oriented Strand Board (OSB) facilities.

The Enduring Timber Sale Program: Demand Side Factors at Work

While the timber sale program has certainly become less significant to our overall timber supply, it remains a major player in a handful of national forests, largely due to their ability to offer some key wood products and specialty woods. Although the market for national forest wood products will never amount to a significant share, demand side factors do impact the program and demonstrate that the program remains important in a few key areas.

After many years of decline, the timber sale program has grown slightly over the last few years. Since fiscal year 2002, the volume of timber removed from national forest lands has increased from 1.73 to 2.03 billion board feet, driven by a significant escalation of logging activity in the Pacific Northwest, particularly in the Siskiyous and east of the Cascade crest, California, and the South. *(For a more detailed description of activities in Oregon, see Oregon's National Forests Profile.)* There has also been a jump in timber value from $92 to $107 per thousand board feet since 2001. What are the possible explanations for this, and what does this tell us about the future of the market for national forest timber?

Markets for national forest timber, like any other commodity, are sensitive to macroeconomic conditions in the U.S. economy. With the post 9/11 recession over, demand for all types of wood products continues to rise. For example, a red hot U.S. housing market has increased new housing starts to their highest levels since the late 1970s and increased demand for wood products used in building. With this increase in demand, supply from all sources, including national forests, is on the increase as are prices paid for raw logs and other wood products.

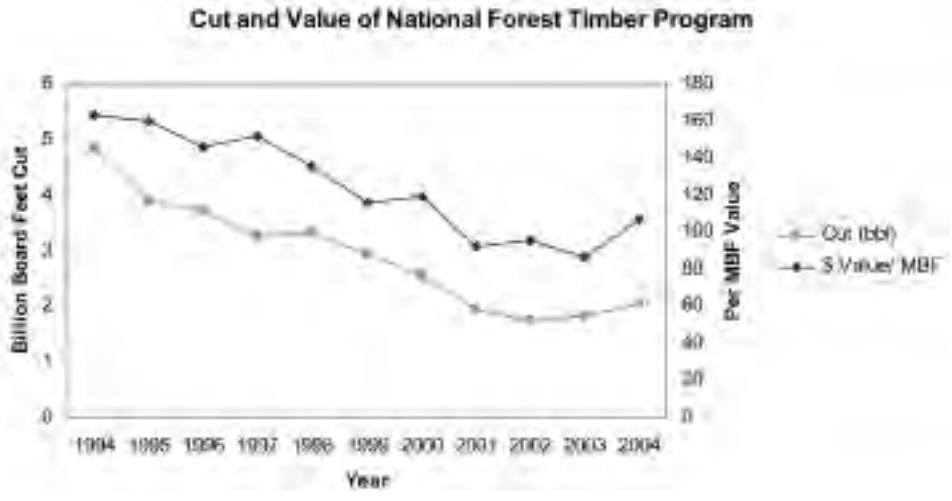


TABLE 1

National Forest Timber Product Output (million board feet) and Market Share in 2002

Region	Pruduct Output (% market share)						
	Sawlogs	Veneer Logs	Pulpwood	Composite Products	Fuelwood	Posts, Poles, and Pilings	Miscellaneous Products
Alaska	57,763,220 (67.8)	—	5,263,797 (4.8)	—	1,343,193 (6.6)		—
Pacific Northwest	133,864,734 (3.0)	61,998,335 (5.6)	1,564,031 (1.2)	505,123 (8.4)	5,455,510 (2.2)	227,352 (0.1)	160,044 (2.5)
California	132,998,949 (6.8)	4,817,442 (5.9)	—	—	14,808,365 (7.8)		—
Intermountain West	204,318,523 (11.0)	23,201,235 (7.2)	11,259,916 (11.3)	522,140 (1.9)	425,995 (1.6)	1,334,557 (26.5)	14,317,074 (32.9)
Southwest	47,753,240 (30.9)	—	16,035,035 (79.1)	—	—	—	11,167,929 (76.6)
Great Plains	89,076,483 (50.9)	—	—	673,455 (75.3)	46,661 (2.0)	48,954 (79.7)	34,365 (2.8)
South Central	93,281,033 (0.9)	28,039,917 (0.8)	25,939,915 (0.6)	1,265,521 (0.6)	1,760,966 (0.6)	938,997 (0.6)	—
North Central	86,795,783 (3.6)	7,642,530 (5.5)	51,917,683 (6.3)	30,797,912 (6.7)	2,053,565 (2.3)	585,994 (4.7)	1,440,967 (1.8)
Southeast	27,945,108 (0.3)	5,406,515 (0.4)	10,671,363 (0.3)	164,410 (0.1)	2,694,518 (0.5)	471,131 (0.3)	305,260 (0.4)
Northeast	11,047,261 (0.3)	291,336 (0.2)	283,359 (0.1)	—	—	579,881 (1.8)	1,158,731 (1.6)
United States	884,844,336 (2.7)	131,397,309 (2.0)	122,935,100 (1.3)	33,928,561 (3.3)	28,588,771 (1.8)	4,186,865 (0.6)	28,584,371 (5.6)

Pacific Northwest: OR, WA
Intermountain West: CO, ID, MT, NV, UT, WY
Southwest: AZ, NM
Great Plains: KS, NB, ND, SD
South Central: AL, AR, KY, LA, MS, OK, TN, TX
North Central: IL, IN, IA, MI, MN, MO, WS
Southeast: FL, GA, NC, SC, VA
Northeast: CT, DE, ME, MD, MA, NH, NJ, NY, OH, PA, RH, VT, WV

Every five years, the USFS produces an analysis of the timber demand and supply situation in the U.S. in accordance with the requirements of the Forest and Rangeland Renewable Resources Planning Act (RPA). The RPA update provides the most current information about the composition and market share of the national forest logging program. The latest update was published in 2002. Table 1 summarizes the results for ten distinct regions in the United States and for the United States as a whole. Regions are defined in the key immediately below the table. The figures in Table 1 were extracted from the RPA's "Timber Products Output" database maintained for each state. For each of these regions, Table 1 decomposes the timber supplied from national forest lands in 2002 into the seven major timber product categories. Supply figures are in million board feet. Below each supply figure, Table 1 indicates the share of regional supply drawn from national forest lands.

Demand for national forest timber is also sensitive to international demand for U.S. wood products that are best made here. While imports are making up an increasing share of the U.S. wood products consumption, we remain a net exporter of many finished and unfinished products. Black cherry from the Allegheny National Forest and Alaska yellow and red cedar from the Tongass National Forest are good examples. And with at least a temporary weakening of the U.S. dollar and strong economic conditions in principle export destinations such as Canada, international demand for many types of U.S. wood products exports is rising. For example, U.S. exports of hardwood lumber, hardwood veneer, hardwood logs, builders' carpentry, and softwood logs to Canada each set new record highs in 2003.

Unless domestic and international economic conditions substantially worsen over the next couple of decades, we can expect that there will be at least some — albeit small — demand for national forest wood products. If we logically assume that demand for national forest wood products resembles demand for wood products nationwide, we can expect that the principle end uses driving demands for national forest sawtimber will be softwood and hardwood lumber used in residential upkeep and improvement, softwood lumber for new housing, and hardwoods used for shipping pallets. Improving markets for oriented strandboard (OSB), particleboard and containerboard will drive demand for lower quality wood products and pulpwood.

Variance in Regional Demand

While only 2% of our nation's wood supply comes from national forests, and sawlogs comprise the bulk of the raw products produced, there are important regional differences to consider for the industry. These differences warrant a closer inspection of the remnant logging program on national forests to better grasp where it remains significant, what products are being supplied, and which companies are involved.

In terms of product, mix, it is clear that while national forests in Alaska, the Pacific Northwest, Great Plains, and Northeast provide almost all of their wood products in the form of sawlogs or veneer logs, other regions supply a more diverse mix that includes significant quantities of pulpwood in the North Central, South Central, and Southwest regions, composite products in the North Central region, fuelwood in California, and miscellaneous products in the Southwest and Intermountain West. *(See Table 1, which summarizes the results for ten distinct regions in the United States and for the United States as a whole.)* Greater diversity in wood products supply, in turn, implies greater diversity in the range of end use products.

There are also significant regional differences in market

TABLE 2

Major Species Logged on National Forest Lands by Region

Region	% of NF Removals	Major End Uses
Alaska		
Hemlock	50.0	Lumber, pulpwood, furniture, cabinets
Spruce	41.5	High grade lumber, pulp for newsprint
Cedars	7.8	Shingles, paneling, fence posts, outdoor uses
Pacific Northwest		
Douglas fir	48.0	Structural lumber, doors, window frames
Ponderosa pine	20.2	Framing, floors, decks, cabinets, furniture
True firs	12.1	Structural lumber, shutters, furniture, doors
California		
True firs	33.9	Structural lumber, shutters, furniture, doors
Ponderosa-Jeffrey pines	24.9	Framing, floors, decks, cabinets, furniture
Douglas fir	16.3	Structural lumber, doors, window frames
Intermountain West		
Douglas fir	28.1	Structural lumber, doors, window frames
Ponderosa-Jeffrey pines	16.6	Framing, floors, decks, cabinets, furniture
Lodgepole pine	16.4	Posts, poles, rails
Southwest		
Ponderosa pine	79.8	Framing, floors, decks, cabinets, furniture
Douglas fir	11.0	Structural lumber, doors, window frames
Spruce	6.6	Veneer, lumber, finishing, pulp
Great Plains		
Ponderosa pine	99.7	Framing, floors, decks, cabinets, furniture
Spruce	0.2	Veneer, lumber, finishing, pulp
Aspen	0.1	Veneer, strand board, pallets, furniture, pulp
South Central		
Loblolly & shortleaf pine	59.3	Structural lumber, planing-mill products, pulp
Red oaks	11.0	Pallets, furniture, flooring, doors, cabinets
Longleaf and other pines	9.4	Structural lumber, floors, poles, pulp
North Central		
Aspen	35.0	Veneer, strand board, pallets, furniture, pulp
Maples	16.1	Flooring, furniture, paneling
Red oaks	9.8	Pallets, furniture, flooring, doors, cabinets
Southeast		
Red oaks	20.5	Pallets, furniture, flooring, doors, cabinets
Longleaf and other pines	19.9	Structural lumber, floors, poles, pulp
Loblolly & shortleaf pines	17.3	Structural lumber, planing-mill products, pulp
Northeast		
Various hardwoods	41.5	Fine furniture, cabinets, boat interiors, pallets
Red oaks	11.6	Pallets, furniture, flooring, doors, cabinets
Yellow poplar	9.3	Light construction, siding, paneling, furniture

See Table 1 for Regions.

share. In the Northeast, Southeast, North Central, South Central, Pacific Northwest and California, national forests supply no more than 7% to 8% of any particular wood product. In contrast, in Alaska, the Intermountain West, Great Plains, and Southwest, national forests are far more important sources of supply for one or more product. For example, sawlogs provided by national forests make up 68% of the regional supply in Alaska and 51% of regional supply in the Great Plains. In the Southwest, national forests supply nearly 80% of the pulpwood and 77% of miscellaneous products. What this implies is that mills that utilize these products in these regions are likely to be highly dependent on supplies from national forests, while in other regions, mills have greater capacity to find other sources.

Regions also differ, of course, in the types of trees most frequently logged. These differences also translate into differences in the end use product mix. *(See Table 2, which profiles these regional differences.)* An important step in tracing these end use products from the shelves back to the national forests from where they came is to identify the top purchasers of national forest wood products in each of the regions *(See Table 3, which lists the top purchasers)*.

Regions also differ in the types of trees most frequently logged, which translates into differences in the end use product mix. Table 2 profiles these regional differences. For each region, Table 2 indicates the top three tree species logged on national forest lands in 2002. For each species, the tables provides a short list of the most important end use products. In five regions, including Alaska, Pacific Northwest, Southwest, Great Plains, and South Central, one species accounts for roughly 50% of all trees logged on national forests. Elsewhere, a more diverse mix is logged. In California, the Intermountain West, and Southeast, the top species logged accounts for one third or less of the total. In these regions, we would expect to find a more diverse range of end use products made from national forest timber.

While the market for national forest wood products will never amount to a significant share, these demand and supply side factors will maintain the market at close to its current level for the foreseeable future. Factors that could influence this include law or policy changes designed to designate or place certain areas or types of forest off limits to logging, efforts to reduce or eliminate the logging program or consumer pressure directed at companies doing business with logging companies sourcing from national forests.

The Marketplace: A New Frontier for Forest Protection

Despite some noted regional differences, it no longer makes sense from an economic and social standpoint for the U.S. to subsidize the logging of national forests. The natural limit on national forestland share, the cost to bring national forest wood products to market, and the economic value of ecosystem services all contribute to the decline of timber sale volume and value.

Given the dire consequences to the environment and the strong socio-economic need to discourage commodity production on national forests, many Americans remain baffled why Congress, the Administration, and the USFS continue to advocate for increased logging. Compounding the problem, the government is simultaneously weakening legal protections for endangered species and wildlife habitat and is making it increasingly difficult for the public to participate in federal forest management. The profiles in this report highlight particularly zealous examples where logging, oil and gas drilling, mining, grazing, and private development are trumping the protection and restoration of national forests. Impacts from these industrial uses are far-reaching and will be difficult — if not impossible — to reverse.

As the USFS moves ahead in the 21st Century, Americans have a right to an honest assessment of whether the agency should or should not be in the wood products business. New sci-

entific discoveries, non-logging economic drivers, and changing social attitudes and trends make the federal timber program seem obsolete when compared to the value of the national forest system as a whole. These questions and concerns must be addressed in the larger context of wood supply and wood consumption in the U.S., as well as in the context of what the national forest system represents to the majority of its citizens. Based on both of these factors, the overall prognosis for the USFS's timber sale program is not a rosy one.

Ultimately, the marketplace may well determine whether or not the USFS's timber sale program has a role to play in the wood and paper marketplace. In the face of continuing industry pressure and governmental efforts to log our national forests, NFPA will be looking to the marketplace to shift logging companies, distributors, manufacturers, retailers and customers away from wood products derived from national forests. Given what the latest economic facts and social trends tell us, the marketplace may just be the most powerful approach to changing U.S. forest policy.

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What Happens to the Timber from National Forest Lands?

The 97 million acres of commercial, productive timberland managed by the USFS provide the seven major categories of raw wood products: sawlogs (71.7%), veneer logs (10.6%), pulpwood (10%), composite products (2.8%), fuelwood (2.3%), miscellaneous products (2.3%), and posts, poles, and pilings (0.3%).

These, in turn, are processed into a wide variety of end use products. Saw logs are processed into lumber, pallets, flooring, and furniture, while veneer logs are used for structural and non-structural panels, such as oriented strandboard (OSB), plywood, particleboard, and insulation board. Composite products are lower quality trees converted into chips, wafers, strands, flakes, shavings, or sawdust and then reconstituted into a variety of panel and engineered lumber products. Pulpwood is processed into paper and paperboard products. Miscellaneous wood products include trees converted into shingles, crates, barrels, packing material, and other such items. Fuelwood, posts, poles, and pilings are marketed with minimal processing.

Overall, national forests supplied just 2.3% of the total wood products supplied by all timberland owners, with market share ranging from a high of 3.3% for composite products to a low of .64% for posts, poles, and pilings.

TABLE 3

*Top 25 Purchasers of U.S. National Forest Timber (Fiscal Year 2004)**

	Purchaser	Bd Ft (000)	Amount Paid	National Forest (& USFS Region) in order of volume
1	D.R. Johnson Lumber	101,856	$9,910,768	Malheur (R6) Deschutes (R6) Payette (R6) Umatilla (R6) Ochoco (R6)
2	Viking Lumber	51,332	$543,547	Tongass (R10)
3	Sierra-Pacific Industries	47,569	$3,458,527	Lassen (R5) Sierra (R5) Tahoe (R5) Sequoia (R5) Shasta-Trinity (R5) Eldorado (R5) Six Rivers (R5)
4	Boise Cascade	46,891	$3,495,914	Boise (R4) Payette (R4) Chippewa (R9) Okanogan-Wenatchee (R6) Sawtooth (R4)
5	Pope & Talbot	45,660	$3,432,665	Black Hills (R2)
6	Franklin Logging	43,396	$4,180,743	Shasta-Trinity (R5) Lassen (R5) Klamath (R5)
7	Travis Lumber	41,540	$4,646,082	Ouachita (R8) Ozark St Francis (R8)
8	Tricon Timber	38,480	$4,397,529	Idaho Panhandle (R1) Lolo (R1)
9	Crown Pacific	31,948	$2,327,095	Fremont-Winema (R6) Deschutes (R6)
10	Neiman Timber	31,234	$2,975,114	Black Hills (R2)
11	Plum Creek	30,743	$6,134,858	Flathead (R1) Kootenai (R1)
12	Biewer	27,738	$3,222,047	Huron Manistee (R9) Chequamegon-Nicolet (R9)
13	Columbus Lumber	27,950	$3,330,231	Mississippi (R8)
14	Vaagen Brothers	27,146	$2,954,870	Colville (R6) Okanogan-Wenatchee (R6)
15	Intermountain Resources	24,985	$937,221	Medicine Bow-Routt (R2) Pike-San Isabel (R2) San Juan (R2) Santa Fe (R3) White River (R2) Grand Mesa-Uncompahgre-Gunnison (R2) Rio Grande (R2) Arapahoe-Roosevelt (R2)
16	Alcan Forest Products	24,250	$378,544	Tongass (R10)
17	R-Y Timber	22,432	$2,206,769	Shoshone (R2) Bighorn (R2) Helena (R1) Sawtooth (R4) Caribou-Targhee (R4)
18	Buddy Bean Lumber	22,072	$3,000,639	Ouachita (R8) Ozark St Francis (R8)
19	CLR Timber Holdings	21,422	$920,965	Siskiyou (R6) Six Rivers (R5)
20	Sappi	20,964	$1,605,616	Ottawa (R9) Chequamegon-Nicolet (R9) Hiawatha (R9)
21	Potlatch	20,734	$1,464,433	Superior (R9) Chippewa (R9)
22	Tom Harmon Logging	20,477	$55,393	Modoc (R5)
23	Silver Creek Timber	20,128	$1,465,264	Siskiyou (R6) Umpqua (R6)
24	C & C Logging of Oregon	20,067	$17,257	Modoc (R9)
25	Swanson Group/Superior	18,172	$3,473,512	Siuslaw (R6) Rogue River (R6)

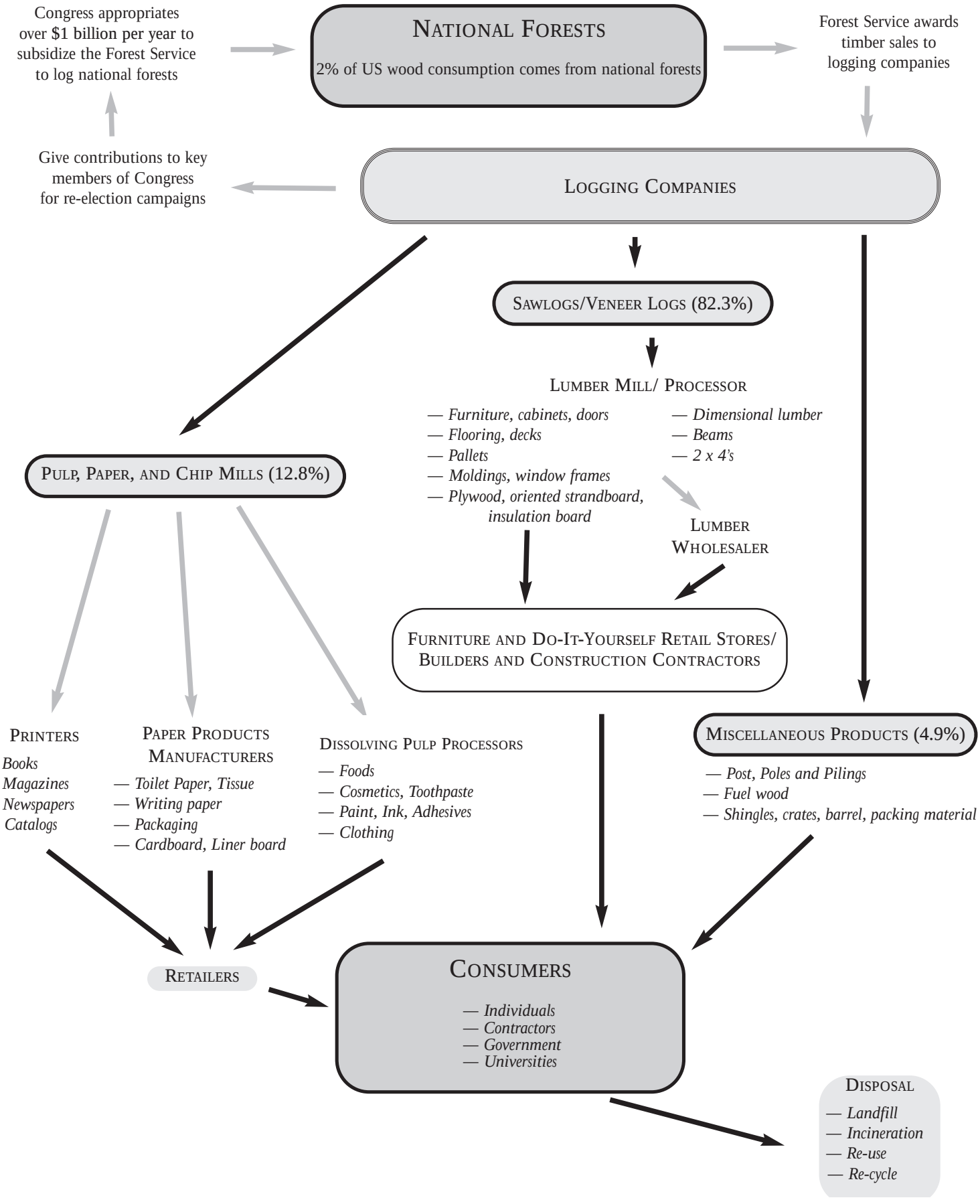
* In fiscal year 2004, the U.S. Forest Service sold 1,873,126,000 board feet for $192,619,301.

The top 100 purchasers represent 77% of the total volume sold and 66% of the total money received by the Forest Service in fiscal year 2004.

The top 25 purchasers represent 44% of the total volume sold and 36% of the total money received by the Forest Service in fiscal year 2004.

Information was compiled by George Draffan of the Public Information Network. Email — pin@endgame.org. Website — www:endgame.org.

Chain of Custody for National Forest Wood Products



Oregon's Endangered Forests

The Malheur, Siskiyou, and Oregon BLM Forests

Home to the endangered Malheur National Forest (MNF), Siskiyou National Forest (SNF), and the West Side Oregon Bureau of Land Management (BLM) forests, as well as the threatened Umpqua National Forest (UNF), Oregon has more at-risk national forests than any other state. Representing some of the most diverse old-growth forests remaining in the lower 48, these forests contain the region's largest roadless areas, which provide critical habitat for threatened and endangered species. In the past three years, the logging volume on national forests has increased by approximately 300 MMBF, largely as a result of an escalation of logging in Oregon.

Malheur National Forest

The 1.46 million-acre Malheur National Forest (MNF) in eastern Oregon, which encompasses much of the Blue Mountains, includes such diverse ecosystems as high desert plateaus, volcanic buttes and canyons, and dense forests. Forest communities vary from arid sage-steppe with juniper and Ponderosa pines in the draws, to dry-mixed conifer forest of Douglas fir and Ponderosa, to a moist-mixed conifer forest consisting of Grand fir, Englemann spruce, Western larch and Lodgepole pine in the upper elevations. One of the Malheur's most distinguishing natural features is the Wild & Scenic John Day River, world-renowned for its outstanding bass fishing. The area is also famous for a national monument, which houses extensive fossil beds, and the Strawberry Mountains, which lure hunters, hikers and tourists. Archaeological and cultural heritage artifacts, lithic scatters, and native as well as pioneer sites abound. As of 1997, the MNF contained 177,865 acres of inventoried roadless areas.

Wildlife Concerns

A host of rare and unique species inhabit the MNF, including: Peregrine falcon, Gray wolf, Wolverine, American marten, Canada lynx, Bull trout, and specific runs of Chinook salmon and Steelhead trout. The two most recently listed species, Bull trout and Canada lynx, have both affected the MNF's timber sale program. Most streams are water-quality impaired and suffer sedimentation and increased turbidity from logging, road building, and livestock grazing. These activities are destroying needed habitat for salmon, Bull trout, Steelhead trout, Redband trout and Malheur mottled sculpin.

Top Threats

Livestock grazing and commercial logging pose the most immediate threats to the MNF. In the late 1980s, loggers removed more than 250 MMBF on average per year from the forest and replaced many stands with pine plantations. While timber sales averaged 78 MMBF annually between 1990 and 1997 and reached a low of 22.2 MMBF in 1994, the MNF and other East Side national forests, such as the Ochoco, Wallowa-Whitman, and Deschutes, have all experienced a logging resurgence due to post-fire logging. As the USFS moves ahead with the new authorities granted under the Healthy Forests Initiative (HFI), particularly categorical exclusions and emergency situation determinations, huge salvage sales such as Monument, Flagtail, Easy, David, Eyerly, High Roberts, and B & B are being fast-tracked using the rationales of insects, disease, and fire. However, the most significant factors that contribute to the MNF's poor forest health are fire suppression and prior forest management, which have exacerbated natural disturbances and created high fuel loads due to the excessive growth of brush and small trees.

The MNF is the most renegade national forest on the East Side. Not only is the USFS failing to comply with forest plan standards for soil impacts and for thermal cover for deer and elk, but the agency is also failing to survey Management Indicator Species (MIS) and is allowing extremely high road densities. Logging companies are exacerbating conditions by continuing to target old-growth forests despite the scarcity of large trees. The MNF forest supervisor, who has ignored court orders and twice violated injunctions, continues to cater to a downsized but vocal timber industry.

Improper livestock grazing, which has caused the de-watering of Aspen groves, low water tables, and a noted decline of aspen and cottonwoods, severely impacts the quality of riparian areas. Within the MNF, riparian areas account for 80% of the biodiversity in the arid region. In 1997, there were 1,323,230 acres in active allotments. Of these, 214,432 acres of range did not meet forest plan standards. In 2005, there are approximately 141,128 Animal Unit Months (AUMs) of authorized use including cattle, horses, and sheep.

Old Growth Ponderosa pines alleged by the USFS to be dead – High Roberts timber sale. Photo by Blue Mountains Biodiversity Project.

Wood Market

Wood from the MNF is used for dimensional lumber, chips, posts, and poles. Log home builders also source timber from the forest. In 2004, the MNF sold 60.5 MMBF of timber primarily to D.R. Johnson, a company that is based in Roseburg, Oregon, which is on the west side of the Cascades. D.R. Johnson is the largest purchaser in the country with 102 MMBF that included sales on the Ochoco, Deschutes and Umatilla.

Siskiyou National Forest

Located in the southwest corner of Oregon, the Siskiyou National Forest (SNF) is distinguished by world-class botanical diversity, fish-rich rivers and remarkably pristine wildlands. While national park and monument proposals have been suggested since the 1930s, the SNF is still threatened by some of the nation's most controversial logging and mining projects. Defined by five spectacular National Wild & Scenic rivers, including the Rogue, Illinois, Chetco, Elk and North Fork Smith, the Siskiyou's rivers are home to self-sustaining wild salmon and steelhead trout. These watersheds are biological hotspots where rare and endemic plants have flourished, for millions of years, undisturbed by major disturbances like glaciation or volcanic eruptions. More than 1,400 species of vascular plants are found in the SNF, 130 of which are unique to the area.

The Siskiyou owes its outstanding botanical diversity in part to its unique geology which includes protected wilderness as well as Oregon's largest expanse of serpentine soils. The epicenter of biodiversity is the 500,000-acre Kalmiopsis Wildlands, which includes protected wilderness as well as Oregon's largest unprotected wild forest, the 103,000-acre South Kalmiopsis roadless area. Collectively, these lands form the largest unprotected roadless landscape near the Pacific Coast. Recently, a 500,000-acre wildfire burned on the SNF leading to the 370 MMBF Biscuit logging project, the largest proposed logging project in the modern history of the USFS. While nearby towns used to be more dependent on subsidized resource extraction, changing regional economies and a rapidly expanding tourism industry promise a more sustainable future.

Post-fire logging of old-growth Douglas fir in the so-called Biscuit Fire Recovery Project. Photo by Rolf Skar.

Wildlife Concerns

The SNF hosts numerous imperiled fish, wildlife, and plants that rely on free flowing rivers, native forests and fire-adapted ecosystems. These include Coho and Chinook salmon, steelhead, Coastal cutthroat trout, Pacific lamprey, Northern Spotted owl, Marbled murrelet, Pacific fisher, and the Del Norte and Clouded salamanders. Both the USFS and the Oregon Natural Heritage Program claim that logging on the site of the Biscuit fire will harm at least 60 species of animals and 40 species of plants. Of particular concern is the loss of soil-enriching nurse logs and standing legacy trees, or snags, on the steep, thin-soiled slopes of the Siskiyou.

The Threat: An Escalation in Logging Activity

During the hot summer of 2002, the Biscuit fire burned in a mosaic pattern within a 500,000-acre fire perimeter across the SNF. Despite strident claims from the logging industry, the SNF is a fire-adapted landscape that depends on natural fires to enhance and maintain its diversity of life. After intense political pressure, SNF officials proposed the 370 MMBF Biscuit logging project, which would span 30 square miles and allow extensive logging in old-growth reserves and inventoried roadless areas.

About 70 MMBF has already been logged as part of the Biscuit project. In these areas, fire risk, soil compaction, erosion, and the spread of invasive weeds has increased. In addition, logging activity has magnified the risk of spreading a root disease (*Phytophthora lateralis*) that is lethal to the endemic Port-Orford cedar. The logging industry and their political allies have used the Biscuit fire to argue for increased subsidized logging on a regional and national scale. In fact, President Bush introduced the HFI after flying over the Biscuit fire in 2002. Oregon Senator Gordon Smith and Oregon Representative Greg Walden are currently using the fire to push for national post-fire logging legislation.

The Threats: Mining and Increased ORV Use

Mining also threatens the SNF. Hundreds of non-economic, in-stream mines currently degrade salmon and trout habitat in the wild rivers of the Siskiyou. In addition, larger projects, such as the 4,400-acre nickel strip mine, which is proposed for Rough and Ready Creek, pose serious threats to the ecological integrity of the SNF. Unlawful off-road vehicle use introduces invasive weeds and Port-Orford-cedar root disease into pristine areas. ORV use also erodes sensitive soils and destroys rare and endemic plants found in relatively open serpentine botanical areas.

Wood Market

Prior to the creation of the Northwest Forest Plan, the SNF was severely over-cut with an annual Allowable Sale Quantity (ASQ) as high as 166 MMBF. Although the cut was reduced to 24 MMBF between 1994 and 2001, it is now increasing to unsustainable levels once again. The wood products industry in southwest Oregon remains sizeable and includes more than a dozen lumber mills and logging companies. Historically, much of the wood from the SNF was processed as lumber and shipped to Asia out of the port of Coos Bay.

Boise has stayed away from the Biscuit sales. Roseburg Forest Products, now the dominant company in the region, has bought a large quantity of Biscuit logs and has lobbied heavily with Columbia Helicopters for an excessive salvage logging proposal from politicians and agency officials. Silver Creek, which incorporated as a business shortly before the sale offerings, is the most active logging company on the Biscuit. CLR Holdings, which owns South Coast Lumber, has purchased several Biscuit sales. Rough and Ready Lumber, located in Cave Junction, Oregon is a long-time buyer. With highly subsidized log prices, Biscuit has cost approximately $6 million to facilitate. According to ECO Northwest, a private economic firm, losses to taxpayers could climb to $30 million or more depending on the future amount of logging.

Oregon BLM Forest

Western Oregon contains five BLM districts, including Salem, Eugene, Roseburg, Coos Bay, and Medford, which total 2.4 million acres of low-elevation, old-growth forest along the I-5 corridor. Oregon's BLM forests are exceptionally diverse and encompass: the Siskiyous, Coast Range, and the Cascades, three distinct mountain ranges that feature ancient

Classic old-growth forest in the proposed Kelsey-Whiskey timber sale within the Zane Grey roadless area; Medford BLM District Photo by Rolf Skar.

Massive old-growth tree cut down in 2005 on the Flying Lost timber sale — Butte Falls Resource Area: Medford BLM District. Photo by www.kswild.org.

coastal hemlocks on the Coos Bay District; biologically rich, mixed conifer forests on the Medford District; and towering Douglas fir forests on the Roseburg, Salem, and Eugene districts. As critical connecting blocks to the more mountainous national forestlands and the main river systems in Oregon, these forests are some of the most productive in the world and provide key watersheds for salmon recovery.

Managed under a suite of laws, including the 1937 Oregon and California Railroad Act, the forests co-exist in a checkerboard ownership pattern with industrial forestlands. However, BLM forests received the same ecological protections awarded USFS lands in the 1994 Northwest Forest Plan to protect old-growth dependant species and salmon bearing waterways. While portions of all of these districts have been heavily cut, they still possess considerable older forest habitat. For example, the Medford contains 128,700 acres (more than 200 square miles) of forest that is more than 100 years old.

Wildlife Concerns

The endangered Northern Spotted owl, Marbled murrelet and Coho salmon and several listed plants exist on BLM districts. By far, the owl has had the biggest influence on logging levels. One of the key provisions of the NW Forest Plan, the survey and manage program, temporarily protected many sensitive, old growth-dependent species like the Red tree vole, Great gray owl and Siskiyou mountains salamander. The program is no longer required due to Bush Administration rule changes.

The Threat: Old-Growth Logging

The program most threatening the Oregon BLM's forests is historic, ongoing and planned old-growth logging. Logging has already fragmented these forests and created watersheds with excessive road densities that exceed four miles of road per square mile of forest. On the Eugene and much of the Salem District, forest managers primarily thin young stands. On all of the districts, the USFS still plans aggressive logging projects in older forests. On the Medford District, there are already 109,613 acres of clearcuts. In total, loggers have removed more than 1.227 BBF from the Oregon BLM public lands throughout the past five years.

The greatest threat to the Oregon BLM forests is the cozy relationship between the Bush administration and the timber industry. In a sweetheart settlement deal with the timber industry, the BLM revised its management plans to open up protected forests for logging. The strategy, which is known as sue and settle, allows the timber industry to sue the BLM after which the administration settles out of court and meets industry demands. The 1937 Oregon and California Railroad Act will be primarily used to manage these forests instead of the Endangered Species Act or other laws that had previously protected sensitive old-growth habitat.

Numerous old-growth logging projects on the Coos Bay, Roseburg, and Medford BLM districts are targeting remaining ancient forests in critical spotted owl habitat, in late successional reserves, and in key watersheds for salmon recovery. Key sales include: Cotton Snake on the Medford; Kelsey Whiskey, which is located next to the Zane Grey roadless area; the East Fork Coquille, which threatens prime low elevation old-growth on the Coos Bay; and Can-Can, a 13.8 MMBF on the Roseburg that is the largest sale in a decade.

Market Section

The primary uses for forest products coming off the BLM lands are dimensional lumber and plywood. There are many co-dominant mills and logging contractors sourcing and operating on BLM lands, but Swanson Inc. in Glendale has emerged as one the most prominent advocates and is politically connected to the Bush administration. Though BLM timber sales often net revenues, due to the high-quality, tight-grained wood, the cost to implement the sales is frequently more than the timber receipts.

Poor industrial logging practices on the Mr. Wilson timber sale, Glendale Resource Area: Medford BLM District. Photo by www.kswild.org.

Allegheny National Forest

In 1923 Congress established the Allegheny National Forest (ANF), located in Northwest Pennsylvania, to protect the area from rampant clearcutting. Situated on a high-elevation, unglaciated portion of the Appalachian plateau, large-scale logging projects and increasing oil and gas development endanger this unique forest. Prior to 1998, when logging levels decreased due to environmental litigation, the Allegheny was the highest cut national forest, on a per-acre basis, in the East. With several large-scale timber sales planned or in progress and nearly two dozen other projects proposed under the HFI, the USFS is quickly returning to pre-1998 logging levels. In the last four years, energy companies have drilled more than 800 new oil and gas wells.

The Forest

The ANF lies in an ecological crossroads between northern-hardwood forests and the oak-hickory and the mixed mesophytic forests of the South. The natural composition of the forest is primarily beech-hemlock-maple with a significant white pine and birch component. Currently, the forest largely contains black cherry, maple, American beech, and oak species. There are two small wilderness areas within the ANF, Hickory Creek (8,630 acres) and the Allegheny River Islands (374 acres) as well as two tracts of old-growth forest, Heart's Content (under 100 acres) and the Tionesta Scenic and Research Natural Area (4,100 acres). Approximately 24,000 acres, or 5% of the Allegheny, is in inventoried roadless areas.

Wildlife Concerns

Although logging has profoundly impacted the habitats of numerous species, only a few are listed and protected by the Endangered Species Act (ESA). The Indiana bat, clubshell mussel, and the northern riffleshell mussel are listed as endangered while the small whorled pogonia and the bald eagle are threatened. Many regional and national conservation organizations are also concerned about the cerulean warbler and have asked the U.S. Fish & Wildlife Service to list the species. Meanwhile, excessive road construction resulting from logging and oil and gas development projects continues to fragment critical wildlife habitat.

The Threat: Logging for Black Cherry

Production of black cherry, which yields more income for the timber program than any other tree species, continues to destroy the native forest diversity of the Allegheny. For the past 40 years, the agency has manipulated the forest through preferential management for black cherry and, to a lesser extent, red oak. Originally, only 1% of the ANF was black cherry, but the species now comprises nearly a quarter of the forest. About 75% of the ANF is designated under even-aged management on an approximate 80-year cycle. Agency foresters justify their even-aged management regime, which includes clearcutting, shelterwood cutting and herbicide application, as necessary to provide an open canopy for the sun-loving black cherry tree.

Between 2001 and 2003, roughly 6,026 acres, or 48.3 MMBF, were logged from the ANF, which has an annual ASQ of 94 MMBF. Currently, 20,000 acres in fragile areas of the Allegheny have been proposed for logging. One of the cutting units would log right up to the boundary of an old-growth forest found within the Tionesta Research Natural Area. Two

Recently cut Black Cherry stump: the most lucrative tree species on the national forest system. Photo by Allegheny Defense Project (ADP).

Pennsylvania Gas Energy well. Photo by ADP.

proposed timber sales, Martin Run and Eagle Wind Mills, would result in the loss of thousands of acres of second-growth forest, slated to become old-growth, adjacent to the Tionesta Scenic Area, a beautiful old-growth forest under consideration for wilderness status.

The ANF is implementing the East Side timber sale that calls for the logging of more than 8,000 acres, which makes the sale the largest active project in the eastern U.S. This controversial project, which was held up in court for two years, involves logging mature, second-growth forest in other key areas that were designated for old-growth retention in the first forest plan.

The Threat: Oil and Gas Drilling

Oil and gas development is widespread as evidenced by the increasing number of wells drilled in the forest. Between 1996 and 2001 alone, development increased 500 percent on the ANF, primarily because private owners can own the mineral rights on federal land. Currently, 93% of the mineral rights on the ANF are privately owned.

Along with the threats posed by drilling, the industry also impacts the integrity of the forest as gravel is mined to create roads for resource extraction. In 2001, 90,120 cubic yards of gravel were mined for construction; 98% of this volume was for private oil and gas companies. This extractive industry has created road densities up to eighteen miles per square mile, diminishing water quality, and impairing waterways by clogging streams with sediment. Currently, approximately half of the 4,000 miles of roads in the ANF are roads that were built to access drilling sites.

Given the current price of oil and the Bush Administration's interest to explore domestic sources on public lands, analysts expect the number of oil and gas wells drilled within the ANF to increase above current levels, resulting in additional forest fragmentation.

The Wood Market

The ANF's timber program is one of the few national forest programs in the U.S. that is consistently profitable. Approximately 75% of the world's black cherry comes from the Allegheny Plateau region and 33% of the world's consumption is sourced directly from the ANF. Demand remains high for black cherry wood, which maintains a high commercial value and frequently sells for $1,500 per thousand cubic feet. Much of the wood, which is exported to Europe, is used to make high-end furniture, paneling, veneers, and other non-essential luxury items.

Collins Pine and Bradford Forest Products, which is owned by the German company the Danzer Group, are the two largest purchasers of timber from the ANF. Temple-Inland and National Fuel's subsidiary Seneca Resources are also important players. Two chips mills, one owned by the Chilean company Aconcagua Timber and one by Weyerhaeuser, both source from the ANF and provide wood chips for a Weyerhaeuser pulp mill and a Temple-Inland fiberboard plant.

Black cherry seedling enclosure keeps white-tailed deer and other browsers out — Martin Run timber sale. Photo by ADP.

Bighorn National Forest

Located in northern Wyoming, the Bighorn National Forest (BNF) spans a large biogeographic island range that has been isolated from other forests in the Rocky Mountains for hundreds of thousands of years. Surrounded by high plains, the Bighorn Mountains harbor several genetically distinct subspecies and many other sensitive species, most of which are not adequately protected.

The BNF began revising the 1985 Forest Plan in 1999 and implemented a revised plan in 2004. Although 97% of the public comments received for the new BNF plan supported the conservation of roadless areas and the creation of five new wilderness areas, the revised forest plan favors an alternative that promotes logging and grazing.

The Forest

The 1.1 million-acre BNF is geologically unique, with remarkable exposed sandstone, limestone, and granite formations and stunning canyons that empty into private ranches on the forest's eastern border. Relatively protected BLM lands border the forest on the south and west. Although most of the Bighorn is comprised of Lodgepole pine, aspen stands are scatted throughout the forest and old-growth spruce-fir forests are found at elevations above 8,000 feet.

Recreational hikers, hunters, and anglers use this diverse landscape for recreational purposes, as well as for food. Numerous cultural sites exist within the BNF, including Medicine Wheel National Landmark, which has been nominated for expanded protection. Although approximately 20% of the forest has been logged, the USFS is conducting aspen regeneration projects in several areas.

This spectacular roadless area canyon is recommended for Wild and Scenic status, but the surrounding roadless area has been slated for development and logging. Photo by Liz Howell.

Wildlife Concerns

Before the new forest plan was adopted, the Forest Service had identified 26 Management Indicator Species (MIS), or species that may be adversely affected by changes in habitat or levels of activity as a result of proposed alternatives. The new plan now recognizes only six generalist species that will not be significantly impacted by extractive activities.

The BNF contains four genetically distinct subspecies: Montane vole, American pika, chipmunks and snowshoe hare. Sensitive wildlife species found in the BNF include the Yellowstone cutthroat trout, Columbia spotted frog, Northern Leopard Frog, water vole, pine marten, sage grouse and the Northern Goshawk. All of these native species are vulnerable under the revised plan.

Meanwhile, bighorn sheep and beaver populations have also diminished. Although lynx and gray wolves occasionally are spotted traveling through the forest, scientists have not documented any breeding pairs. The new plan fails to protect lynx habitat and also fails to encourage activities that will allow these species to return to their historic ranges.

The Threat: Livestock Grazing

Livestock grazing causes more significant and pervasive ecological, geo-morphological, and hydrological impacts than any other management activity currently in operation on the forest. Abusive grazing has resulted in widespread sheet erosion, loss of topsoil, gullying and the degradation of plant communities. Currently, the BNF has one of the highest stocking rates (118,000 AUMs) of any national forest.

The agency's grazing program has resulted in severe impacts to hydrologic function, loss of stream bank stability, serious bank erosion, downcutting, and sedimentation that has reduced proper hydrologic function and degraded aquatic habitat for species like the Yellowstone cutthroat trout and the Mountain Sucker. Bighorn sheep cannot be reestablished on their native land due to decades of grazing domestic sheep leaving spores in the soils.

Forest managers have failed to evaluate the lands truly suitable for grazing and the areas where grazing is clearly inappropriate, such as research natural areas, areas of cultural and historic importance, and impaired waterways.

The Threat: Losing Roadless Acres

Although the BNF is one of the last national forests to undergo the forest plan revision process using the old regulations, it is one of the first to implement the Bush Administration's radically new and harmful methodology of inventorying roadless areas. As part of the original Roadless Area Conservation Rule, forest managers identified 620,000 acres of RARE II lands in the BNF. As a result of policy rule changes for mapping and modeling roadless areas, the forest plan now identifies only 490,000 acres. Forest supervisors also failed to apply accurate reference landscapes and conduct proper road analysis. As a result of the changes, the Bighorn lost 158,000 roadless acres or 24% of the previous roadless total.

Past logging roads opened up a plethora of ATV abuse. Lamburger Rock is visible in the distance. Photo by Liz Howell.

In the 1920's this area was tie-hacked and this old-growth lodgepole forest remains. Important elk security cover is found here. Photo by Liz Howell.

The Threat: Taking the Public Out of Public Lands

Historically, the timber industry has exerted a strong influence over the management of the BNF and industry demands have often trumped public concerns. In 1999, the USFS began revising the 1985 Forest Plan and by 2004, the agency had received more than 16,000 public comments in support of the conservation of roadless areas and the designation of five new wilderness areas. These comments, which reflected 97% of the total received, also strongly encouraged the USFS to identify recreation as the predominant use of the BNF. To the dismay of those in support of conservation, the final forest plan allowed for increased logging and road building in both roadless areas and in areas of the BNF that contain old-growth forest. Once again, the public was ignored in order to serve the local politics of resource extraction.

The Wood Market

Although the market for wood products sourced from the BNF is relatively small compared to other regions, Wyoming and Montana sawmills do purchase timber. Wyoming Sawmills, the largest buyer, is owned by an Oregon corporation that has been urging local, state and federal officials to support an unsustainable ASQ.

The timber sale program on the BNF is one of the USFS's largest financial drains. Timber sales lose an average of $1,365 per acre logged, or $125 per thousand board feet cut. When tallied against the 25% payments to Wyoming counties, 100% of the receipts never reach the federal treasury.

This roadless area, because of the new forest plan, will be available to road development and logging. 2004 Photo by John Yeager.

Daniel Boone National Forest

Situated in eastern Kentucky, the 702,000-acre Daniel Boone National Forest (DBNF) rests on the Cumberland Plateau's western escarpment. The forest has started to mature after near-complete deforestation roughly 100 years ago and is now threatened by an all-time high logging boom. The USFS plans to construct more than 200 miles of roads and spray herbicides throughout the DBNF, turning recovering native forests into tree farms. In addition, the agency also plans to allow 9,000 acres of industrial logging and more than 23,000 acres of pre-commercial thinning.

Currently, Interstate 66 and the Morehead I-64 connector road, which threaten unique areas of the forest, pose the greatest development threats to the DBNF. Coal mining — and its associated pollution — is a major issue on the Redbird District where several mines are proposed. Despite the forest's official low-access policy, widespread use of off-road vehicles (ORVs) poses a significant threat to forest integrity.

The Forest

Encompassing a large portion of the headwaters of six of Kentucky's major rivers, the DBNF contains more than 3,000 miles of clifflines, an extensive network of caves, and a host of rare and endemic species. Some of the cleanest streams in the state attract anglers to the Boone. The area's mixed-mesophytic forest hosts a vast array of hardwoods interspersed with the pine-dominated communities of the Deep South, boasting outstanding biodiversity and unique upland bogs and glades. With the exception of one isolated 70-acre patch in Tight Hollow, no original forest remains.

The history of logging and coal mining on the DBNF is one of boom and bust economics, which has allowed industry to flourish while communities remained impoverished. The inhabitants of the DBNF are the poorest in the United States, surviving within a torn social fabric riddled with destitution, drug abuse, and violence.

Wildlife Concerns

One of the most outstanding features of the DBNF is its aquatic fauna. Kentucky ranks third in the nation for aquatic fauna diversity. Running waters on the Daniel Boone support approximately 60% of Kentucky's native fish, 28% of all southeastern fish, and about 18% of the native freshwater fish in the U.S. Seventeen mussels and three fish species are listed as threatened or endangered.

The endangered Red-Cockaded woodpecker (RCW) and the Indiana bat most significantly affect management activities on the DBNF. Despite intensive recovery efforts involving the translocation of more than 50 RCWs, the reintroduction failed. The bird is considered extirpated here, although the agency has begun to systematically replant pine plantations in the name of RCW recovery. The Indiana bat's presence throughout the forest shut down the timber sale program between 1998 and 2001.

The Threat: New Interstate Highways

Two major highway projects, Interstate 66 and the I-64 Morehead connector, pose the most significant threats to the Daniel Boone. These unnecessary highways would result in major impacts to wildlife, topography, recreation, and water quality, including increased sediment runoff and highway effluents. I-66 would bisect the entire southern end of the DBNF, leveling 400 acres of biologically diverse forest and fragmenting a segment of Kentucky's Wild & Scenic Rockcastle River. The highway would permanently damage the underlying karst cave system, compromise water quality, and threaten globally rare and endemic species. The I-64 connector road would bisect Big Perry Mountain, which is a popular backyard recreation grounds for Morehead residents that is used by hikers, joggers, hunters, campers, and horseback riders.

These pork barrel projects, which road builders and politicians con-

Looking up at a grandfather white oak in the proposed tree farm in the Wild & Scenic Rock Creek. Photo by Krista Lewis.

The Wild & Scenic Rockcastle River and its surrounding forests and karst caves are threatened by a proposed interstate highway – I-66 – that would bisect the southern end of the DBNF. Photo by Perrin de Jong.

Gazing out from Lockegee Rock over the proposed Morehead timber sale surrounding Cave Run Lake. Photo by Perrin de Jong.

ceived, were based on suspect projections of "future need." For example, I-66 would link the towns of London and Somerset, which are already connected by U.S. 80, a low-traffic four-lane highway.

The Threat: Timber Extraction

Even-aged logging techniques, which mostly utilize two-aged shelterwood cuts, are used extensively on the DBNF. The USFS tries to log about 7,000 acres annually, but recently the agency has initiated an effort on the southern end of the forest to reestablish 40,000 acres of pine plantations that were wiped out by the native Southern Pine Beetle between 1999 and 2000. The agency has failed to consider the obvious vulnerability of the pine plantations to natural disturbance.

Tree Farms, Tree Farms, and More Tree Farms

The Daniel Boone is currently experiencing a major tree-farming boom, as evidenced by the following projects:

1. *The Morehead timber sale/South Morehead tree farm.* Located on the northern end of the forest, these projects would log 4,800 acres, thin 22,800 acres for future logging, build 109 miles of roads, and spray thousands of gallons of herbicides in the habitat of endangered Indiana bats, breeding bald eagles, and in the headwaters of the water supply for more than 80,000 Kentuckians.

2. *The Redbird Ruffed Grouse tree farm.* Located in the southeastern part of the forest, this project involves the establishment of a 12,500-acre ruffed grouse management area that will be managed with intensive logging and burning. The project would log 1,400 acres, build 22 miles of roads, permanently deforest 110 acres and spray herbicides within the watershed that provides the drinking water for the city of Lexington.

3. *The Upper Rock Creek tree farm.* Located on the southern end of the forest, the project involves 1,619 acres of industrial logging, 7,650 acres of prescribed burning, 1,011 acres of herbicide applications, fourteen miles of road and bulldozed fire lines and 383 acres of pine plantations in the Wild & Scenic Rock Creek corridor, which offers the best trout fishing stream in the state.

4. *The Brushy Ridge tree farm.* Located directly in the center of the forest, the project involves 1,456 acres of industrial logging and 219 acres of thinning adjacent to the Sheltowee Trace National Recreation Trail, the Boone's flagship recreation trail.

Wood Market

The primary industrial uses for DBNF wood are pallets and dimensional lumber. An unknown amount of wood from the forest gets sold to TrusJoist MacMillan, an engineered lumber mill that manufactures laminated strand board in Perry County. The largest purchaser in 2004 was Forest Products in Corbin, but the most outspoken company, Harold White Lumber in Morehead, is aggressively lobbying for more logging.

Before the 1990's, when environmental litigation shut down the timber sale program, the DBNF lost an average of $1,000,000 per year. With the program gearing up again, taxpayers can expect to lose millions more. For example, the agency's Environmental Assessment for the Morehead sale, which grossly understates the costs and excludes road building, claims the sale will lose $2.2 million.

Fishing on Kentucky's best trout stream — the Wild & Scenic Rock Creek, which is threatened by industrial logging, herbicide spraying and pine plantations. Photo by Warren Davis.

Los Padres National Forest

Located along California's central coastline, the 1.76 million-acre Los Padres National Forest (LPNF) forms the hub of a large matrix of public lands and provides crucial linkages to other national forests, BLM lands, national wildlife refuges, national monuments, and the Monterey Bay National Marine Sanctuary. The Los Padres is different than other national forests because it contains no commercially valuable timber. Nevertheless, the forest suffers increased resource damage from oil and gas drilling, grazing and unlawful off-road vehicle use.

The Forest

The LPNF extends across 220 miles of the scenic Coast and Transverse Ranges. Centered at the juncture of three major ecological regions and the marine coastline, it has been designated one of the world's top biodiversity hotspots. While chaparral and grasslands dominate the landscape, the Los Padres encompasses a wide range of ecosystems including oak woodland, mixed conifer, coast redwoods, pinyon-juniper, semi-desert scrub and riparian areas. Most of the forest is composed of steep, rugged coastal mountains.

The LPNF contains about 2,500 sites of cultural or historic importance and one of the richest records of prehistoric paintings in the world. The Los Padres contains ten wilderness areas, including the San Rafael Wilderness, the first area designated by Congress after the passage of the Wilderness Act of 1964, and 37 inventoried roadless areas, which encompass 636,000 acres. Eighty-four miles of Wild & Scenic Rivers, including the Sespe, Sisquoc and Big Sur, flow through its boundaries.

Wildlife Concerns

The Los Padres, which boasts more threatened and endangered species than any other national forest in California, is home to 26 imperiled species. Despite its rich biological diversity and high number of sensitive species, the USFS fails to manage and monitor at-risk plants and animals and continues to authorize activities in sensitive habitats without an adequate analysis of potential impacts. This is best exemplified in the proposed oil and gas development in California condor habitat. Currently, the LPNF is home to only 56 condors, which are one of the world's most endangered species. In the LPNF alone, taxpayers have invested more than $35 million in recovery programs to save the species.

Grazing allotments threaten the habitat of the red-legged frog, arroyo toad, steelhead and the Smith's blue butterfly. Off-road vehicle (ORV) use is a growing trend that disturbs many sensitive, threatened and endangered species and their habitats.

The Threat: Oil and Gas Drilling

The LPNF contains the only commercial quantities of oil and gas within the national forests of California. Currently, there are 240 active oil wells on the LPNF covering 4,863 acres. In 2005, the agency approved a plan that would allow oil drilling to expand into three new areas of the forest that span 52,075 acres. While the agency prohibits surface disturbance in roadless areas, the decision still allows oil development on 4,277 acres of pristine wildlands. Many of the new drilling areas abut wilderness areas and sensitive condor habitat. By the agency's own calculations, new drilling — which increased development by 200 percent — will produce a scant four-and-a-half day supply of oil at the current U.S. consumption rate.

The development project will result in a spider-webbed network of roads and pipelines that will fragment and destroy intact habitat and fragile landscapes. New oil drilling will also produce 12,179 pounds of air pollutants, including oxides of nitrogen and reactive organic compounds, two of the primary elements of smog. New drilling is also allowed near Lake Piru, which provides several community water supplies, threatening agriculture and clean drinking water.

The Pacific Valley Flats unit of the Gorda grazing allotment along the Big Sur Coast, where the Forest Service is proposing to allow grazing on up to 30,000 acres on this world-famous coastline. Photo by Los Padres Forest Watch.

Proposed oil drilling sites are located next to the Sespe Condor Sanctuary and the Hopper Mountain National Wildlife Refuge, both of which provide critical habitat for the endangered California Condor. Expanded oil drilling will place the bird's recovery at risk. Photo by Los Padres Forest Watch.

The Sespe Oil Field is where most of the forest's existing oil drilling occurs. This area is right next to the Sespe Wilderness and Sespe Condor Sanctuary, and is in the watershed of the Sespe Wild & Scenic River. Photo by Los Padres Forest Watch.

Two drilling areas border existing wilderness and areas of high ecological significance, the Wild & Scenic Sespe River and the Upper Cayuma River. Although all inventoried roadless areas will be designated "No Surface Occupancy," slant drilling will be allowed adjacent to the areas. Such intensive drilling operations will impact the ecological integrity of pristine wildlands, degrade important archeological sites, and adversely impact protected species, including the San Joaquin kit fox, least Bell's vireo, southwestern willow flycatcher, blunt-nosed leopard lizard and the California spotted owl.

The Threat: Grazing

45% of the LPNF, or 860,000 acres, is open for grazing within 107 grazing allotments. A recent study by California Trout and the California Native Plant Society found that 78% of these allotments have not undergone an environmental review. Livestock grazing on the Los Padres frequently destroys riparian zones, tramples plants and compacts soils, degrades water quality, and fosters invasive species.

Unfortunately, the agency allows grazing in sensitive areas along the Big Sur coastline and in the habitats of threatened and endangered species, such as the red-legged frog, steelhead and the Smith's blue butterfly. The USFS violated the Wilderness Act of 1964 by authorizing grazing in the newly designated Silver Peak Wilderness. Forest officials are working behind the scenes to unravel the boundaries of this spectacular area to accommodate private grazing interests. In a recent report, Public Employees for Environmental Responsibility (PEER) documented that livestock grazing damaged several local sites of cultural significance to Native Americans, including rock art in the Sierra Madre Archeological District.

The Threat: Off-Road Vehicle Abuse

There are many negative impacts from the proliferation of ORVs and routes on the LPNF. The Los Padres is criss-crossed with more than 990 miles of ORV routes, with an additional 1,000 miles of undocumented ORV trails. The agency has been unable to manage and enforce vehicle trespass and overuse. In 2004, the Los Padres recorded more than 1,700 ORV-related violations. Increased sedimentation into sensitive waterways from erosion, disturbance to fish and wildlife, and conflicts with wilderness use and other low-impact recreation are common. Despite these impacts, the agency proposes to expand ORV use into pristine areas of the forest.

Wood Market

The Los Padres contains no commercially valuable timber.

The San Cayetano High Oil and Gas Potential Area is one of the areas targeted for new drilling. This area is located next to the community of Ojai and Santa Paula and is near popular recreation areas. Photos by Los Padres Forest Watch.

George Washington and Jefferson National Forests

The George Washington & Jefferson National Forests (GWJNF) straddle the central Appalachians and run 300 miles along the rugged backbone of Virginia. Industrial logging and high road densities threaten water quality in the Potomac, James, New and Tennessee River basins, which provide drinking water for numerous municipalities. The landscape is a very popular location for millions of visitors who frequent scenic corridors like the Blue Ridge Parkway and who explore hiking trails like the Appalachian Trail.

Timber sales continue to damage a variety of unique habitats and elevation zones, which contain numerous roadless areas, eastern old-growth forests and habitat for more endemic and endangered species than any other national forest in the country. Under the revised Forest Plan, much of the Jefferson is now open to oil and gas drilling and mineral leasing. Industrial wind energy developers have targeted the ridges in the forest as potential sites for 400-foot windmills.

The Forest

Totaling 1.79 million acres and spanning the Allegheny and Blue Ridge Mountains, the GWJNF harbors more old-growth and unprotected roadless areas than any other national forest in the East. With 689,000 acres designated as part of the suitable timber base, the potential exists for more than 800,000 acres of the rest of the forest to be managed as large blocks of wild, native forest.

The GWJNF hosts a diverse spectrum of vegetative communities due to its varied elevations, slope aspects and ridge systems. More than 100 different tree species are found here. Oak-hickory and oak-pine are the most common forest types, while moist hemlock-hardwood stands are found in coves and riparian areas. Above 5,000 feet, red spruce and the rare Fraser fir predominate, although the latter is dying off due to air pollution.

Wildlife Concerns

More than 70 species of amphibians and reptiles, 55 mammals, and numerous neo-tropical songbirds reside on the GWJNF, making it one of the nation's biodiversity hotspots. Twenty seven plant and animal species are federally listed as threatened or endangered, including 14 endangered mussels, which is more than any other national forest.

The Mt. Rogers National Recreation Area on the Jefferson, where the highest elevations in Virginia are found, contains a place holding the greatest diversity of salamander species of any area of its size on Earth. Scientists recently identified two lungless salamanders believed to be new to science. The GWJNF has a high diversity of bats including several that are federally listed and sensitive, such as the Indiana bat, Virginia big-eared bat and Eastern small-footed bat. Black bears maintain a stronghold here and there is enough suitable habitat for beavers, otters, fishers and even cougars.

The Threat: Timber Sale Program

Logging is the most dominant resource extraction activity on the forest. It occurs on steep, rocky slopes, in old-growth stands, at high elevations within Virginia Mountain Treasure areas, in roadless areas, and in special biological areas, such as the habitat of the Peaks of Otter salaman-

Caption: _____. Photo by Sherman Bamford.

Canbe timber sale. Cut in 2005 on Dry River Ranger District of GWNF. Photo by Steve Krichbaum.

In the new Jefferson National Forest plan proposed by the U.S. Forest Service, nearly three-quarters of its acreage will be open to gas leasing -- both natural and coalbed methane.

der, an endemic species found nowhere else in the world. Between 1988 and 2003, the average annual cut was 45.8 million board feet (MMBF). In 2004, the GWJNF sold just under 21 MMBF.

The Jefferson's new forest plan proposes to increase the ASQ to 21.2 million board feet — a 20% increase above the previous allowance. Under this plan, road construction and reconstruction are allowed on 71% of the JNF, or on 514,000 out of 723,000 acres. Overall, there are 3,000 miles of "system roads" on the GWJNF with another 1,200 miles of state roads passing through. These figures do not include the thousands of miles of temporary roads within forest boundaries. The continual building of roads for logging can significantly impact soils, hydrology, wildlife, and cultural resources.

Logging and associated road building since the RARE II inventory have greatly diminished the size of many inventoried roadless areas, such as Big Schloss and Crawford Mountain, and eliminated some areas all together. The Hoover Creek, Hematite, and Maybe timber sales all logged prime eastern old-growth forest. After the USFS offered the controversial Bark Camp timber sale on the Clinch Ranger District for the third time, a successful bidder was recently awarded the first cutting units in Joel's Branch.

The Threat: Illegal Use of ORVs

Like other national forests, illegal use of off-road vehicles (ORVs), including ATVs, 4WD vehicles and dirt bikes, is rampant and results in widespread resource damage and water quality problems. The chief law enforcement officer on the GWJNF, Woody Lipps, recently stated, "The number one threat on the forest is illegal ATV use." To date, no disclosure of the present use has occurred, preventing anyone from having enough baseline information to analyze cumulative effects.

ORVs are frequently spotted in roadless areas, streams, and riparian zones and Special Biological Areas, or forest sites designated in the forest plan to protect their special biological values. Illegally constructed tracks are discovered regularly on the GWJNF and agency officials confirm that law enforcement has been unable to address the problem. ORV use removes soil and damages plants through compression and trail erosion resulting in gullies that channel runoff laden with sediments directly into streams. Poaching appears to be the primary purpose driving much of the illegal motorized use.

Roadless Areas

The GWJNF's 403,000 acres of inventoried roadless areas comprise more than half of the roadless areas in the Southern Appalachian national forests. However, the USFS failed to include hundreds of thousands of acres of uninventoried roadless areas that ranged between 3,500 and 8,000 acres. The current plans for the GWJNF allow logging, roadbuilding, and other activities inconsistent with the Roadless Area Conservation Rule on 81% of GWJNF roadless areas. Currently, special places like Mill Mountain, Oliver Mountain, and Dry River are open to timber sales.

Wood Markets

The marketplace for wood products on the GWJNF is still dominated by pulpwood production and averages 60% or more in recent sales. Two large Mead-Westvaco pulp mills in Covington, Virginia and Kingsport, Tennessee buy pulp logs and other low-grade timber sourced from other timber purchasers on the forest. Small to medium-sized hardwood lumber producers like Neff Lumber Mills, Shoun Lumber and Shenandoah Hardwood Lumber play a significant role as well. Oaks are the primary tree cut from the forest for commercial sale.

Since the agency discontinued its TSPIRS (a timber sale tracking data base) report, which attempted to track the costs of national forest timber sales, there is no way to compute the losses on individual forests. However, the GWJNF's program has consistently lost money — more than $8 million between 1992 and 1997 — from both the direct and indirect costs, such as pre-commercial thinning.

Female state-"threatened" Wood Turtle in GWNF. Photo by Steve Krichbaum.

Tongass National Forest

Created a century ago, the Tongass National Forest (TNF) is a coastal temperate rainforest, the rarest forest type on Earth, which encompasses most of a vast archipelago that is Southeast Alaska. At 17 million acres, of which 8.5 million are forested, the TNF is America's largest national forest and the most significant, relatively intact remnant on the planet. The TNF has been intensively logged since 1954. Timber sales remain the primary threat, although insufficient market demand has depressed logging activity throughout the past five years. Many inventoried roadless areas are on the chopping block and industrial logging continues to threaten truly sustainable forest uses, with the USFS and industry pressing to increase logging by three times the current rate. Rapacious logging, which has occurred since 1980 on privately owned Native corporation forestlands that are intermingled with the forest, has magnified the problem. Other key issues include hardrock mining and inappropriate tourism development.

The Forest

Home to some of the world's and the United States' best remaining old-growth temperate rainforests, the TNF stretches for an awe-inspiring 500 miles along Alaska's panhandle. The forest is composed of 11,000 miles of coastline laced with fiords and thousands of mountainous islands, including the nation's third-largest island, Prince of Wales, which is the most intensely logged area of Southeast Alaska. Much of the Tongass is rock, ice and muskeg, however its ample rainforest is at the core of the region's richness offering ancient Western red and Alaska yellow cedar (AYC) and towering Sitka spruce.

The region's residents and communities use the resources of the Tongass for both their livelihoods and for subsistence. Forest-linked commercial fishing and tourism are the mainstays of the economy. The bounty of the land and sea not only feeds many rural families who still lead a traditional way of life, but it also attracts many tourists seeking recreational activities such as hunting, fishing, and kayaking.

Wildlife Concerns

The highest density of grizzly bears in North America thrives in this forest, as do bald eagles, Sitka black-tailed deer, the Alexander Archipelago wolf, and runs of all species of Pacific salmon. More than any other species, the salmon generate unparalleled commercial, sport, and subsistence fishing opportunities. Several whale species, porpoises, sea otters, Stellar sea lions and marbled murrelets all thrive in the surrounding nutrient-rich ocean waters. Stellar seal lions and marbled murrelets are listed as threatened species in the contiguous U.S., but not yet in southeast Alaska. And the Queen Charlotte goshawk, an old-growth dependent raptor, is under consideration for threatened status after a federal court ordered the U.S. Fish & Wildlife Service to reconsider its listing.

The Threat: Taxpayer-Subsidized Timber Sales and Road Building

Industrial-scale logging continues to dominate resource exploitation on the TNF, despite the present decrease in logging and milling. Whatever the rate of future logging, it intensifies a legacy of destruction that began in 1950 and has culminated in the clearcutting of nearly a million acres, the creation of 5,000 miles of logging roads, and an elevated annual timber production. All logging activity, which consists predominantly of clearcuts, occurs in centuries old temperate rainforest, continuing the strategy of logging the best forest possible.

Port Stewart, Alaska, site of a proposed log dump on Cleveland Peninsula along the Behm Canal. Photo by Greenpeace / Mark Linneman.

Remote from markets, large-scale logging on the TNF has never been economically viable. Accordingly, the timber industry has been continually subsidized with a federal timber and road building program that historically has not been sustainable. For 40 years, the TNF has consistently lost more money than any other national forest, with subsidies costing American taxpayers $1 billion, or $35 to $50 million annually, since 1982. Building a road in the TNF costs taxpayers on average $150,000 per mile. Yet logging dominates TNF management as a result of the powerful Alaska congressional delegation. With congressional funding, TNF staff is trying to increase the annual cut to 150 MMBF (the average rate of the past century), from the current level of approximately 50 MMBF.

The Threat: Logging in Pristine Roadless Areas

Of the 17 million acres of the TNF, inventoried roadless areas total 9.2 million acres and account for approximately 15% of national roadless area total. This year's Tongass National Forest Ten-Year Timber Schedule calls for more than 50 large timber sales that would remove roughly one billion board feet of timber from roadless areas. Industrial logging lies at the heart of this management scheme, continuing a decades-old USFS practice that resulted in litigation over seven roadless area timber sales.

In August 2005, the 9th Circuit Court of Appeals ruled that the USFS must revise the Tongass Forest Plan because the agency had mistakenly arrived at an excessive annual Allowable Sale Quantity (ASQ) of 267 MMBF. Due to this ruling, it is expected that the TNF will set the ASQ near the present 150 MMBF target. While the target may not change, a lower ASQ would reduce the amount of forest allocated to logging and possibly protect many roadless areas. The TNF will be the first forest plan revision under the newly revised, and weakened, National Forest Management Act regulations. Meanwhile, roadless logging on sales like Chasina, Finger Mountain, Madan, and Three Mile remains temporarily enjoined while the district court sets the terms of a permanent injunction. Since the suit did not directly address roadless logging, additional advocacy is needed to press for full protection of TNF roadless areas.

The Threat: Hardrock Mining

Much of the TNF is highly mineralized and historically has contained several large underground mines within its boundaries, including a uranium mine. A large open-pit molybdenum mine was nearly opened in Misty Fiords National Monument in the 1980s. Greens Creek, which is presently operating in the Admiralty Island National Monument, is one of the world's largest gold/silver mines. There are several active proposals for new mines and ongoing exploration. A significant threat from mining is water quality degradation, which disrupts local economies that depend on fishing.

Wood Market

Four medium-sized sawmills that source from the TNF operate in Southeast Alaska and a veneer mill seems likely to open this year. The sawmills export whole logs and produce cants, railroad ties, and green, rough-cut or planed lumber. Logs and a majority of the sawn materials, which move either directly to or through Washington ports, are exported to Japan and other Asian countries.

Viking Lumber, which ranks as the second largest purchaser of national forest timber, is the largest purchaser of timber from the Tongass. About 30% of TNF logs are low-value wood that is chipped or left at the clearcut. Periodically, chips have been sold to pulp mills in British Columbia and Washington. Increasingly, however, wood chips from the TNF are becoming a waste product that is costly for the sawmills to dispose.

A significant concern is the high-grading of red cedar and AYC. While both species are valuable, AYC is by far the most valuable Tongass tree. The species, which is in a long-term decline, possibly due to climate change, regenerates very slowly. Contemporary USFS timber sales typically target both red and yellow cedar. Most of the AYC goes to Japan, and red cedar is made into shingles for U.S. and European markets. High-value old-growth Sitka spruce is a premiere wood for musical instruments.

Clearcuts and roads on Hassler Island within the Tongass National Forest north of Ketchikan. Photo by Greenpeace / Mark Linneman.

National Forests in Mississippi

The 1.1 million-acre National Forests in Mississippi (NFM) is composed of six distinct forests, all of which represent critical forest fragments within the state's disfigured ecological landscape. The unique forests, which were listed as critically endangered by the World Wildlife Federation, vary in type from southern mixed to piney woods to bottomland hardwoods and harbor fabulous reservoirs of biodiversity.

Historically, the pulp and paper industry has significantly altered the NFM through commercial logging. To date, the forest remains one of the top federal timber producers. The USFS is trapped in a twenty-year-old forest plan whose revision has been halted more than once. The NFM is currently searching for the third supervisor, within the span of five years, to manage the planning process. The forest plan revision is a potential tuning point and could shift the plan's emphasis from a focus on pine plantation management to managing for wild, more diverse forest ecosystems.

The Forest

The seven forests, which include the Bienville, Delta, DeSoto/ Chickasawhay, Homochitto, Holly Springs, and Tombigbee are dispersed throughout Mississippi and are managed as a single administrative unit. The forests include a range of different ecosystems, such as: pine and oak forests on the Tombigbee; cypress swamps on the Delta; longleaf pine stands with insect-eating pitcher plant bogs on the DeSoto; and the Jackson Black Belt Prairie, one of the country's most threatened ecosystems, on the Bienville.

The Delta district contains the only bottomland hardwood forest in the National Forest system and harbors some of the last old-growth forests in the Mississippi Delta. In many areas, 80 to 130 year-old trees thrive and provide a precious remnant of the wet, mossy bottomland forests that William Faulkner celebrated. Despite this richness, the forest has no old-growth or rare forest inventory. Although the NFM has no intact RARE II areas, the Delta does contain the remote 6 Mile Bayou area, roughly 10,000 acres which are accessible only by foot/ATV trails, that conservationists have proposed for wilderness study.

Wildlife Concerns

Because of its diversity, varied topography, and climate, the NFM is home to many sensitive, threatened and endangered species. At the top of the list is the Red-Cockaded woodpecker. Although the species receives significant management attention in the piney woods districts, it still struggles to recover. Other at-risk species such as the Eastern Indigo snake, golden eagle, Gulf sturgeon and the gopher tortoise have not received any level of protections. Old-growth dependent wildlife, such as the Louisiana black bear, face an uncertain future given the NFM's dwindling diversity of tree species and short rotation logging.

The Threat: Bad Forest Planning

The 1985 forest plan called for an Allowable Sale Quantity (ASQ) of 400 MMBF a year. For the first decade, the NFM averaged between 300 and 350 MMBF annually. Lawsuits and reduced market demand in the pulp and paper sector in the wake of the chip mill invasion have drastically reduced the cut. Between 1998 and 2003, the cut averaged 78 MMBF, while in 2004 the NFM sold almost 89 MMBF.

Much of the NFM was converted to loblolly and slash pine plantations due to an industry even-aged management mandate in its original plan. Maintaining these plantations was the USFS's top priority until very recently. Some of the agency's most ecologically abusive forest practices include girdling and poisoning native hardwoods, heavy pre-commercial and commercial thinning, and, of course, conversion to loblolly (yellow) and slash pine. This management regime was geared mostly for pulp and paper to the detriment of long-term forest viability and other important forest uses.

The NFM's simplistic and commercially driven approach to forestry, referred to as general forest management, or high-volume timber production using clearcutting on a 65-year rotation, is gradually being replaced by logging that better promotes forest health and restoration. Yet, entire districts, which were once dedicated to industrial pine production to feed an eager pulp and paper industry, now justify the same scale of logging in the name of longleaf pine restoration and salvage sales to curb the southern pine beetle.

Restoration efforts range from logging both mature longleaf pine stands and residual longleaf in slash and loblolly plantations, to thinning

Black Creek for sale: Mississippi's only designated Wild & Scenic waterway is slated to be logged; Desoto National Forest. Photo by Davis Mounger.

Chip mills like this one sprung up throughout Mississippi placing even more logging pressure on national forestlands. Photo by Davis Mounger.

fairly open mixed-hardwood stands to controlled burning in longleaf, mixed and upland sites. Although burning in the piney woods is essential to these ecosystems, debate ensues regarding the role fire plays in the regeneration of other forest types. The effects of repeated logging on the forest's soil, water, and biodiversity are evident across the landscape as high road density, stunted tree growth and pine plantations compromise the ecology of these diverse forest ecosystems.

Assault on Black Creek

Black Creek, which is located on the Desoto and is Mississippi's only National Scenic River and National Scenic Trail, is a great example of questionable longleaf pine restoration and the agency's disregard for non-commercial interests. Currently, the NFM is conducting a massive timber sale in the heart of this area. More than 600 acres of seedtree, shelterwood, and clearcuts and 1,000 acres of thinning will visually impair the scenic trail.

The timber sale allows the logging of 358 acres of mature, healthy longleaf, while purportedly restoring longleaf on adjacent slash pine stands. Nowhere else in Region 8 forests is logging mature longleaf pine practiced in the name of restoration. A federal judge in Mississippi has recently upheld the project in a lawsuit brought by Heartwood against the NFM.

Wood Market

As one of the nation's top producers, the NFM's timber program attracts chip mills, pulp mills, timber companies, and logging contractors that vary greatly in size, milling capacity, and sourcing areas. Chip mills are a major industry in Mississippi and wood-chipping for paper and Oriented Strand Board (OSB) is the most dominant end use. Georgia Pacific and Weyerhaeuser are both major players in the state and own chip mills, pulp and paper/board mills, lumber, plywood and particleboard mills.

In the last two years, Gulf Lumber Co. was the largest purchaser followed by Columbus Lumber Co., Hood Industries and B & B Chip & Timber. All of these companies rank among the ten largest purchasers from Region 8. All of the logging projects on the NFM operate at a loss to taxpayers from road construction and incomplete accounting of sale costs.

Rare pitcher plant bog in longleaf pine habitat—Desoto National Forest. Photo by Davis Mounger.

Ancient Bald Cypress along Six Mile Bayou—Delta National Forest. Photo by Davis Mounger.

Bitterroot National Forest

The 1.6 million-acre Bitterroot National Forest (BNF) frames the scenic Bitterroot Valley, one of the fastest growing regions in Montana. Although nearly half of the BNF is designated wilderness, it remains one of nation's most endangered forests due to controversial industrial logging projects. The Middle East Fork Hazardous Fuel Reduction project — Montana's first "fuel reduction" project authorized under the Healthy Forests Restoration Act (HFRA) — calls for logging nearly 4,000 acres of old-growth forests in critical elk and bighorn sheep habitat.

Ongoing failure to complete over $16 million in promised watershed and road restoration work as part of the 2001 Burned Area Recovery Plan has resulted in significant on-the-ground damage. Failure to complete this work, combined with the increasing use of Categorical Exclusions (CEs) in timber sales, unregulated ATV use, and the proposed creation of the largest ski area development in North America in a key roadless area pose significant threats to the integrity of the BNF. These problems are compounded by a history of poor leadership and forest management that has resulted in public distrust and disengagement, particularly among citizens from the Bitterroot and Missoula Valleys.

The Forest

From the granite crags that reach 10,000 feet in the Bitterroot Range to the rolling montane forests of the Sapphires, the BNF is a case-study in management contrasts. Below the Anaconda Pintlar Wilderness and pristine Sapphire crest, much of the forest and the lower elevations bordering the Bitterroots is degraded from industrial logging and road building. Scenic alpine peaks, rocky canyons and rare Whitebark pine sweep down from the Bitterroot crest to mixed conifer (Lodgepole pine, Western larch, Engelmann spruce, Sub-alpine fir) forests and then to Douglas fir/Ponderosa pine before descending into pure ponderosa stands mixed with sage and prairie grasses on the valley bottom. On the Sapphire side, less dense stands of pine and fir dominate low elevations and are replaced by mixed conifer stands as elevations increase. Nearly 26%, or 405,187 acres, within the BNF are inventoried roadless acreage. These wildlands attract newcomers drawn to the many amenities offered by the region. Tourism, construction and health care have replaced logging and agriculture as the primary economic engines of the Bitterroot Valley economy.

The Middle East Fork Hazardous Fuel Reduction project - Montana's first "fuel reduction" project authorized under the Healthy Forests Restoration Act (HFRA) - calls for logging nearly 4,000 acres of old-growth forests in critical elk and bighorn sheep habitat. Pictured here are old-growth Douglas-fir slated for logging within unit 7. Photo by Matthew Koehler.

Wildlife Concerns

The BNF hosts a world-class assemblage of wildlife species that depend on the great diversity of habitat types found in the forest. The abundant grasses in the forest understory of the Sapphires provide critical winter habitat for thousands of elk, bighorn sheep, mountain goats and deer. The elk herd in the Anaconda Pintlar Wilderness, which lies on the southeastern end of the Bitterroot, numbers 8,000 alone. The BNF also provides for many threatened species, including Bull trout, Snake River spring/summer chinook salmon, grizzly bear, gray wolves and lynx. Threats to bull trout and westslope cutthroat trout have limited logging and road building operations due to the extremely poor conditions on nearly two-thirds of the watersheds within the timber base. The Selway/Bitterroot ecosystem is one of the critical recovery zones identified by the US Fish and Wildlife Service for grizzly bears in the lower 48.

The Threat: Logging Old-Growth Forests

National public reaction to the BNF's rampant clearcutting and the bulldozing of mountainside terraces for tree plantations in the 1960s helped establish the National Forest Management Act. Once again, the BNF finds itself at the center of controversy, this time for its draconian application of the Healthy Forests Restoration Act (HFRA).

The Middle East Fork Hazardous Fuel Reduction project, Montana's first HFRA project, would cause the industrial logging of 3,798 acres of previously intact old-growth forests of Douglas-fir and ponderosa pine. Massive trees up to four feet in diameter would be removed under this purported "Healthy Forests" project. Critics of the project argue that approximately 33% of the project area, or 8,491 acres, has already been logged. Currently, 208 miles of roads — an average of 5.2 miles of road per square mile — already exist in the project area. These roads currently contribute

This photo clearly illustrates three reasons that the Bitterroot is endangered. In the foreground is the aftermath of the logging done in 2003 under the so-called "Burned Area Recovery Plan." It closely resembles the 1980s era clearcut in the background on the left. The large patch of unlogged forest in the background on the right is actually unit 13 of the Middle East Fork Hazardous Fuel Reduction project, where the Forest Service plans to cut down old-growth trees to improve forest health. Photo by Matthew Koehler.

Damage resulting from insufficient ORVs law enforcement. Photo by Larry Campbell.

151.2 tons of sediment per year to streams within the project area. The USFS admits that the East Fork of the Bitterroot River could receive an additional 9.38 tons of sediment per year. Soil disturbance poses another serious threat, as 20% of the acres slatted for industrial logging already exceed the USFS Region One soil quality standard.

Through a series of public meetings, field tours and science panels, prominent Ph.D. entomologists, ecologists, soil, fire and fisheries scientists, including well-respected faculty members of the University of Montana's School of Forestry and Conservation, have questioned the USFS's rationale for this project. Local residents that live near the project area have also voiced opposition to aspects of the project.

In response to the BNF's old-growth logging plan, local community members, conservationists, foresters, firefighters, hunters and outdoor enthusiasts developed a plan that would provide far superior wildfire protection to the East Fork community, protect old-growth forests, elk and bighorn sheep winter grounds, and implement bona-fide restoration activities within the East Fork area. While the USFS has included the alternative plan in their analysis, forest managers arbitrarily eliminated the watershed and road restoration aspects of the plan.

To date, the BNF has ignored the concerns of prominent scientists and concerned locals, and instead is moving forward with plans to start logging nearly 4,000 acres of mature and old-growth forests by late fall 2005.

The Threat: Failure to Complete Restoration Work

In 2000, the largest wildfire in the country brought national attention to the Bitterroot. In the wake of the event, the USFS proposed the Burned Area Recovery (BAR) Plan with the support of Forest Service Chief Dale Bosworth and Under Secretary of Agriculture Mark Rey. This "Recovery" plan originally called for logging 181 MMBF of trees, a volume that would fill 36,200 log trucks aligned for 300 miles, from 46,239 acres. Following a controversial court-ordered negotiation, which Bosworth and Rey attended, a settlement was signed that allowed the USFS to log 14,000 acres and conduct various road and watershed restoration projects.

According to the Forest Service, industrial logging as part of this plan had occurred on 11,742 acres by February 2005. The vast majority of the logging targeted large trees and occurred up to ten miles from the nearest community. To add insult to injury, over $16 million slated for critical non-logging restoration and rehabilitation activities, taken away from the recovery project by Chief Bosworth in order to pay for firefighting costs of the 2002 season, have yet to be returned. While the industrial logging is nearly finished, about 75% of the critical watershed and road restoration work remains unfinished and unfunded more than three years into the plan. Without funding, it is unlikely that vital watersheds and fisheries will be restored.

There are real, on-the-ground consequences associated with the Forest Service's failure to complete promised road and water restoration work as part of the "Burned Area Recovery Plan." With over $16 million slated for critical non-logging restoration and rehabilitation activities taken away from the Bitterroot Burned Area Recovery project by Chief Bosworth to pay for firefighting costs of the 2002 fire season, nearly 75% of the promised restoration work remains undone. Photo by Matthew Koehler.

The Threat: Motorized Recreation

Off road vehicles (ORVs) threaten BNF's wildlands and key corridors along the Sapphire crest and through the Allan Mountain Roadless Area near Lost Trail Pass. Although there are 2,992 miles of routes open to the 11% of forest users who use motorized recreation, there are only 895 miles of non-motorized trails. Studies show that ORVs fragment and disrupt regional wildlife corridors and often erode trails and other areas, making it easier for the spread of noxious weeds.

Wood Market

There are no large sawmills remaining on the BNF since Darby Lumber closed in 2000 due to the Asian market crisis. Prior to that, Champion International and Plum Creek Timber Company were both significant players. Pyramid Mountain Lumber in Seeley Lake, Montana was the top purchaser in 2004. Although no large sawmills remain, the Bitterroot Valley is home to many thriving log home companies.

Special Mention

Black Hills National Forest

Political Update

The environmental threats to the BHNF have eased since last year, largely due to the political implosion within the State of South Dakota. Former Senate Minority leader Democrat Tom Daschle lost his bid for a fourth Senate term in 2004, in part due to his betrayal of two major constituencies: Native Americans and environmentalists. With his unconstitutional transfer of Great Sioux Reservation Treaty lands to the State of South Dakota in the Missouri River Mitigation Act, Daschle violated the Fort Laramie treaties. In 2002, Daschle inserted a rider, which waived environmental and cultural protection laws on two of the last three roadless areas remaining in the BHNF, into the Supplemental Appropriations Bill. In addition, Representative and former Republican Governor Bill Janklow was convicted of felony manslaughter in 2003 for running a stop sign and killing a motorcyclist. Along with Daschle, Janklow was deeply involved with the rider affecting Treaty lands. The demise of these two anti-environmental politicians makes another logging rider much less likely.

The 1.2 million-acre BHNF is a biologically distinct forest ecosystem where species from Rocky Mountain, eastern deciduous and boreal forests overlap. The Black Hills is also a biogeographic island that is surrounded by the Great Plains and is isolated from the nearest mountain range, the Bighorns, which are located 150 miles to the west. Extensive logging, road building, overgrazing, mining, and human development threaten the BHNF's amazing biodiversity and unique evolution.

The Forest/Wildlife Concerns

The BHNF contains a number of relict populations of rare species and unusual plant communities. Many of the forest's species, such as the Black Hills red-bellied snake, Pahasapa mountainsnail, Bear Lodge meadow jumping mouse, Black Hills finescale dace, and the Dark-eyed white-winged junco exist only in the BHNF. The isolation of these vulnerable animal and plant communities makes them more susceptible to extirpation due to declines from both catastrophic natural events and ongoing resource extraction. Today, populations of buffalo, grizzly and black bears, wolves, moose, and mountain sheep are absent from the forest.

The Threat: Decline of Old-Growth Forest

The BHNF is in a class by itself when it comes to exploitation of our public lands. Logging and road building activities are promoted on virtually every acre. As a result, most of the forests have been logged at least once. A shortage of old-growth, or large areas of continuous, relatively undisturbed forests with abundant standing dead trees and down logs, is the greatest threat facing native species in the Black Hills. By its nature, old-growth is diverse, complex and supports disproportionately more native species than other forest habitat. Presently, the USFS estimates that less than 1.5% of the BHNF is old-growth. Much of it exists as scattered patches on steep slopes or near roads and campgrounds, making its value for wildlife minimal.

Every acre on the Black Hills has been logged at least once in the last century, with most logged three to four times. Consequently, few roadless areas remain and this one, located in the Norbeck Wildlife Preserve, was logged in 2003.

The on-the-ground consequences of former Sen. Tom Daschle's lawless logging rider on the Black Hills.. Photo by _____.

Cultural Threats

The Great Sioux Nation

For the past 150 years, the Great Sioux Nation has fought the encroachment of American settlers into their territory with the westward expansion of the United States. At one time, the Great Sioux Nation, accurately called the Oceti Sakowin, covered the span of fourteen American states and three Canadian provinces. Although many smaller nations with different cultures and languages resided in this geographic territory, the Great Sioux Nation was the dominant people. The Tetuwan (Lakota speakers) were the last to oppose the continuing incursion of American settlers as the other six tribes that constituted the Great Sioux Nation were almost completely obliterated. Today, a few Dakota and Nakota speakers currently live along the Missouri River in South Dakota and in Canada.

The Sacredness of the Black Hills

In the Fort Laramie Treaties of 1851 and 1868, the last two treaties signed between the Great Sioux Nation and the U.S., the U.S. sued for peace with the Great Sioux Nation. The sacred Black Hills were the center of the treaties, as more than 60 indigenous nations had traveled to the Black Hills for millennia to conduct spiritual ceremonies, gather medicines, and collect lodge poles. Ancient funery practices of the Tetuwan were held in the Black Hills where bodies were given back to the Creator by being laid on the large branches of trees. Indigenous nations did not kill animals in the sacred Black Hills.

Healing water from Grandmother Earth can be found in various places in the Black Hills. Visitors to the area can still find many petroglyphs with messages painted on the sides of high cliffs. Tetuwan origin stories tell of the exact place where the two-leggeds (human beings) entered on the face of the Earth, a place now desecrated as a tourist trap. The entire Black Hills are also surrounded by a unique geologic formation, which Tetuwan know was the race track of the animals and birds, where the continued survival of the humans was contested.

The Desecration of the Sacred

In the early 1870s, prospectors illegally entered the Black Hills and carried out nuggets of gold. The U.S. ignored these actions and eventually began a succession of deceitful actions that continue to this day, allowing the exploitation of the region and ignoring input from the rightful indigenous owners.

The entire Black Hills are sacred – not just one small place, one burial site, or one prayer site. There is a sacred energy field around the Black Hills that extends about 50 miles around the forest, according to one elder. Determined to protect the region, Defenders of the Black Hills have as their motto: “Remember, the Black Hills are sacred.” Seeking respect for their long-standing spiritual connection to the Black Hills, Defenders asked the USFS to recognize this by placing Lakota signs on the BHNF. Recently, the agency denied the request.

The Threat: Phase II Amendment to the Black Hills Forest Plan

As a result of environmental litigation, the BHNF is undertaking major changes to its management plan to ensure protection of its natural values. Through what is being called the "Phase II Amendment," the agency is considering different alternatives to protect rare and imperiled wildlife, fish, and plants. Unfortunately, the BHNF has focused the amendment on fire risk reduction and not on wildlife protection. As currently proposed, the Phase II Amendment would ignore scientific recommendations, fail to protect old growth, fail to protect rare and declining wildlife and its habitat and fail to ensure the long term health and sustainability of the Black Hills. A decision on the Phase II Amendment is expected any time.

Bear Butte -- the most sacred indigenous site in all of the Black Hills. Photo by Defenders of the Black Hills.

Special Mention

Nantahala National Forest

Established in 1920, the Nantahala National Forest (NNF) was one of the first eastern forests to be included in the national forest system. Containing many of the Southeast's large and intact roadless areas and old-growth forests, the Nantahala contributes to the Southern Appalachians' incredible biodiversity. Its many rivers provide drinking water and recreational opportunities for adjacent communities. Due to the region's increasing popularity, a growing population places significant pressure on the forest's resources, resulting in degrading recreational trails, polluted streams, and the quick spread of invasive species. Habitat destruction and corresponding forest fragmentation that are caused by logging and road building remain the main threats to the NNF.

The Forest/Wildlife Concerns

The Nantahala, Pisgah, Cherokee, Chattahoochee-Oconee, and the George Washington-Jefferson National Forests, combined with the Great Smoky Mountains National Park, make the Southern Appalachians the largest concentration of public forestland east of the Rockies. At 1.35 million acres, the NNF contains 30,814 acres of old-growth and offers the most biologically diverse temperate forests in the U.S. Unfortunately, only 21% of the forest is protected and current logging threatens roughly 83% of the 172,000 acres of inventoried roadless areas.

The NNF and surrounding forests contain at least 130 species of hardwoods and more than 2,000 species of flowering plants. The forest provides refuge for more than 50 species of terrestrial plants and animals that are listed as endangered or threatened and for 289 imperiled aquatic species. Species at risk include the Carolina northern flying squirrel, Cerulean warbler, peregrine falcon, the bog turtle and many plants. Like other forests in the East, the ESA listing of the Indiana bat caused a temporary halt to logging on the NNF. The U.S. Fish & Wildlife and the USFS have since developed mitigation measures that allows logging to proceed in Indiana bat habitat. To date, critical habitat that is essential for the recovery of the species has not yet been designated.

Cumulative Effects from Large Timber Sales

The Nantahala consistently faces intense logging pressure in western North Carolina. Its amazing reservoir of biodiversity is routinely sacrificed for large timber projects and other short-sighted management practices. In 2003, 1,218 acres were logged. On average, five MMBF are removed from the NNF annually, however, most of the logged stands are mature hardwood forests with high ecological importance. In 2004, the forest finalized six additional timber sales that will result in the loss of thousands of acres of intact forest. In just the first quarter of 2005, the NNF unveiled six more sales and four road building projects.

Forest fragmentation from high road densities, skidding operations, and other egregious logging practices and the creation of early-successional game habitat is an ever-increasing problem for many kinds of fish and wildlife that are dependent on large, intact forest patches. As the number and size of intact patches decrease within the suitable timber base, the amount of mature forest and subsequently populations of species that depend on the intact patches also decline.

New Recreational Demands

A mounting threat to the integrity of the Nantahala is the region's rapid population growth, which is adversely impacting the natural resources of the NNF. The Nantahala holds some of the nation's best whitewater paddling and premiere fishing opportunities in the region, which attracts large numbers of recreationists. An increasing population brings increased demand and more significant ecological impacts on forest resources such as water, soils, wildlife, forest trails, and recreation areas.

SABP interns examine the size of this magnificent Tulip poplar that will be destroyed as part of the Chairmaker timber sale. These trees are essential for providing habitat for the endangered Indiana Bat. Photo by Ben Prater.

This stream runs through the protected Joyce Kilmer Memorial Forest which is connected with the greater Nantahala ecosystem. Photo by Ben Prater.

Threatened

Carson National Forest

The Valle Vidal or "Valley of Life" in northern New Mexico's Carson National Forest is ground zero for increasing domestic energy production on public lands — one of the stated goals of the Bush-Cheney Energy Plan.

Rising from high-elevation grasslands at 6,000 feet to Wheeler Peak, the highest point in New Mexico at 13,161 feet, the Carson National Forest's (CNF) 1.5 million acres provides stark contrasts in scenery, ecology and culture. The CNF shelters many imperiled species like the northern goshawk, Mexican spotted owl, Rio Grande cutthroat trout and the Canada lynx, which are threatened by oil and gas exploration, livestock grazing, overzealous thinning and firewood programs, recreation and roads. As one of the first national forests established, the CNF has 9,000 years of rich human history and has been inhabited by the Taos Pueblo, Jicarilla Apache, and the Spanish. Hispanic influence is still strong among the many rural villages that are scattered throughout the forest.

Presently, oil and gas exploration pose the greatest threat to the ecosystems of the CNF. Driven by the Bush/Cheney Energy Plan's goal to dramatically increase oil and gas leasing on federal public lands, the CNF now produces more oil and gas than any other national forest in the West. Currently, oil and gas development threaten the San Juan basin in the Jicarilla district and the Valle Vidal, which is in the northernmost portion of the CNF. In 2004, the USFS proposed the creation of between 700 and 800 new oil and gas wells and the leasing of more than 2,500 acres in the Jicarilla District. With 700 wells in operation and 98% of the district already leased for oil and gas, development at this pace would adversely impact the forest's known 14,400 archaeological sites and its native animals and plants, such as the Gunnison's prairie dog, the burrowing owl, and Ripley's milkvetch.

The pristine 100,000-acre Valle Vidal, or "Valley of Life," which encompasses the headwaters of the Canadian and Rio Grande Rivers, is home to 200 bird species and 60 mammal species, including New Mexico's largest elk herd. Ironically, the USFS has thrice refused to allow drilling in the area since Pennzoil, seeking protection for the wildlife and recreation values of the Valle Vidal, donated the area to the agency in 1982. El Paso Co. did however file a lease in 2002 for coalbed-methane gas drilling in the eastern Valle Vidal, which at the time contained no oil and gas leases.

After meeting with Robert Middleton, director of the White House Task Force on Energy Project Streamlining, the USFS considered reopening this sensitive area to drilling. In the summer of 2004, the CNF released a Reasonable Foreseeable Development Scenario, which argues that up to 500 CBM wells could be drilled in the eastern Valle Vidal unit throughout the next 20 years. However, New Mexico Governor Richardson and his administration oppose drilling in the Valle Vidal, which is only projected to provide enough gas to supply electricity to U.S. consumers for eleven hours.

Wayne National Forest

Road damage and soil erosion from illegal ATV use. Photo by Chris Crews.

The 238,000-acre Wayne National Forest (WNF), which is located in the southeast portion of Ohio, is the state's only national forest. Predominantly rural, the forest encompasses large sections of mixed eastern hardwoods, with pockets of hemlock and other evergreens in lower elevation ravines. The WNF is home to a variety of native plants and animals, including the Indiana bat, Ohio buckeye and small-whorled pogonia. Like most eastern forests, the WNF faces a number of ecological challenges from decades of heavy resource extraction.

After nearly ten years without any timber sales, the USFS has begun to log and burn the forest. In July, a federal judge denied a challenge to two timber sales, which included a HFI salvage logging project and a forest plan amendment for threatened and endangered species. The court action opened the door for industrial logging. In addition, oil and gas development and widespread outdoor recreational vehicle (ORV) use pose significant threats to forest health and have severely impacted large areas of the WNF. An increase in the use of ORVs in the forest continues to put significant pressure on agency resources as a result of illegal trail creation and resource damage.

Threatened

Old-growth marked to be cut in the Meteor timber sale; Klamath National Forest. Photo by

Land Between the Lakes National Recreation Area

Managed by the USFS, the 179,000-acre Land Between the Lakes National Recreation Area (LBL) is a rugged, long peninsula between Kentucky and Barkley Reservoirs, formerly the Tennessee and Cumberland rivers. Currently, the most significant threat facing the area is one that is unique to national forests—farming. The agency has fragmented the LBL from commercial row crop farming and large livestock pastures. Thousands of acres are commercially farmed using heavy machinery, herbicides, and chemical fertilizers. In addition to intensive agriculture, the LBL contains two elk and bison livestock ranges that are so overstocked that the agency is forced to feed them hay throughout the year.

Logging is also a serious threat to the LBL. Annually, timber companies cut approximately five MMBF. The USFS wants to burn and thin 8,600 acres to create open oak woodlands on the LBL, although there is little evidence that suggests such habitat existed on such a scale. In addition, the USFS wants to intensely manage 2,000 acres, using slash and burn methods, in what the agency calls nature demonstration areas. The widespread use of off-road vehicles (ORVs) also threatens forest health. The Turkey Bay Off-road Vehicle area, which is crisscrossed by gullies and ruts up to ten feet deep, is causing major erosion. All of these activities generate significant resource damage and degrade public enjoyment of the area.

Flathead National Forest

On the 2.3 million-acre Flathead National Forest (FNF) in Montana, the USFS has pursued an aggressive salvage logging policy since 2001. All of the post fire logging projects that the agency has offered are either adjacent or near Glacier National Park or the Bob Marshall Wilderness, one of the biggest wilderness complexes in the U.S. Indeed, every major fire outside of wilderness areas has been followed by a large-scale industrial logging project. Examples include the Moose Salvage project, Robert Wedge Salvage, Westside Reservoir Salvage, and the Crazy Horse I, II, and III Salvage. FNF officials have publicly stated that they implemented the policy and these projects in order to restore the forest.

More than one dozen timber sales, which are located in critical grizzly bear habitat, threaten one of the only remaining grizzly populations in the lower 48. The sales also target old-growth forest that is an integral, but unprotected, part of these wild areas. Fast tracked by Regional Forester Gail Kimball and Forest Supervisor Cathy Barbouletos, these projects bypassed the public appeals process so that logging could begin immediately. Moreover, most of the projects were exempted from the Flathead Forest Plan's requirements to limit road densities in grizzly bear habitat, which far exceed the limits necessary for the species' survival.

Kaibab National Forest

Perched on the North Rim of the Grand Canyon, the Kaibab is home to the highest density of old-growth Ponderosa pines remaining in the Southwest. The Kaibab Plateau, which also includes Grand Canyon National Park, contains the only game preserve in the country. Created by President Theodore Roosevelt in 1906 to protect the native flora and fauna of this unique area, the preserve offers outstanding backcountry hunting opportunities. In 1965, 200,000 acres of the KNF was designated as a national natural landmark for Kaibab squirrel habitat. Conservationists have recently proposed a 400,000-acre old-growth Ponderosa pine preserve that could protect more than 500,000 contiguous acres of forest.

Due to its geographic isolation, significant portions of old-growth remain. However, the KNF's logging program continues to target large diameter trees. In 1992, the agency developed management guidelines to protect the Northern Goshawk. However these guidelines have allowed over 55,000 old-growth trees to be logged by creating openings in the forest. An additional 6,000 old-growth trees are currently being logged in the Dry Park timber sale, which is located two miles from Grand Canyon National Park. The USFS has recently proposed the East Rim timber sale, which would allow logging in 2,300 acres of old-growth, or nearly four square miles of prime habitat.

Michigan National Forests: Huron-Manistee, Hiawatha & Ottawa

Michigan's three national forests total 2.8 million acres and border three of the Great Lakes. Intertwined with other important publicly owned lands, such as Porcupine Mountains State Park, Pictured Rocks, and Sleeping Bear Dunes National Lakeshores, and 4.6 million acres of state forest, this wildlands complex beckons outdoor enthusiasts who are drawn to its wetlands, multiple forest types, and plentiful fish and wildlife. These forests are laced with hundreds of lakes, sixteen Wild & Scenic rivers, and streams that contain headwaters that flow into Lake Superior, Lake Michigan, Lake Huron and west to the Mississippi River via the Wisconsin River.

Only 100 years removed from the clearcutting that laid bare 50 million acres, logging is once again the dominant extractive activity in Michigan's national forests. With the annual cut averaging more than 170 MMBF, the forests are one the highest producers of lumber and pulpwood east of the Mississippi. Young forests result from the cumulative impacts of past mismanagement and logging has intensified so much that the agency has breached its own management plans. Natural gas pipelines and drilling in the Huron-Manistee and sulfide mining for copper, zinc, gold, and silver in the Upper Peninsula also pose major threats. Currently, all three national forests are revising their forest plans to create better management practices and new wilderness areas.

Klamath National Forest

The Klamath National Forest (KNF), which is at great risk from USFS mismanagement, is one of the great reservoirs of biological diversity in western North America. The KNF includes large chunks of the wildest and most intact lands left in the great Klamath-Siskiyou ecoregion, including key unprotected roadless areas. Today, roads have been built throughout much of the forest and logging threatens the integrity of the entire ecosystem. Instead of restoration, the USFS has been encouraging backcountry logging in old-growth forests.

The condition of the Salmon River basin is illustrative of the state of the entire forest. Surrounded by great wilderness complexes, the remote river's remarkably high water quality shelters key populations of its signature salmon and steelhead. The Salmon's spring chinook run contains some of the last survivors of the great Klamath spring runs and is key to the river's recovery. In spring 2005, only 83 springers returned, making the run the smallest to date. Conservationists must act quickly to protect the old-growth forests, on which the survival of fish and other species depends.

Old Growth Pacific yew growing along Meadow Creek - Nez Perce National Forest. Photo by Chuck Pezeshki.

Nez Perce National Forest

The Nez Perce National Forest (NPNF) is located in north-central Idaho's Big Wild, the largest wildlands complex in the lower 48. The forest encompasses parts of the River of No Return, Selway-Bitterroot, and the Gospel Hump Wilderness Areas. Roadless areas on the NPNF and adjacent Clearwater National Forest provide additional habitat for elk, bear, moose, wolves, lynx, wolverines, salmon, and steelhead. Logging has compromised parts of this wild environment along with suction dredge mining and grazing allotments. Motorized recreation continues to encroach into roadless and wilderness areas.

Increased logging projects in the South Fork Clearwater drainage from the NPNF, an already compromised watershed according to state water quality standards, pose the most significant threat to the forest ecosystem. In total, these projects call for six timber sales and the construction of nearly 100 miles of roads and will negatively impact salmon and steelhead that are vital for the Nez Perce tribe. Further logging and road building here will only increase the risk of landslides and stream turbidity and will destroy spawning habitat for salmon and steelhead. Ironically, the Nez Perce tribe has obliterated many miles of road in the South Fork drainage to help restore declining salmon and steelhead populations.

Umpqua National Forest

The Umpqua National Forest (UNF) boasts some of the finest old-growth fir/hemlock forests remaining in Oregon and an abundance of threatened and endangered species. Historically, the UNF has ranked as one of largest national forest timber producers and has twice been listed as endangered in previous reports. Today, the UNF remains threatened from continued clearcutting and road building. In addition to the fact that segments of the forest that have been converted to plantations (305,000 acres) and covered with roads (5,000 miles), grazing, old dams and the overstocking of non-native fish harm the forest's unique ecology.

In 2004, the USFS sold 34.7 MMBF of timber from the UNF and cut 31.6 MMBF from post-fire logging operations following the summer of 2002. Yet the 2004 level pales in comparison to the volume in 1988, during which timber companies removed 397 MMBF. Today, the USFS continues to harvest old-growth timber sales. Two recent sales include the Whitebird and Jigsaw, which are within unprotected roadless areas. Roseburg Forest Products, the most dominant player in southern Oregon, recently cut the 3.6 MMBF Pigout sale. Given the heavy toll from past management and ongoing pressure from the industry, the USFS is reaching a crossroads between the need to protect what remains for future generations and the need to provide timber.

Old Growth in Unit 5 of the Jigsaw Timber Sale on the Umpqua National Forest. Photo by Francis Eatherington.

Alternatives to National Forest Wood

The U.S. wood market has shown that it can absorb a decline in federal timber, as it has already decreased by more than half since 1994. Although national forests account for 2% of total U.S. wood consumption, one of the challenges from a conservation standpoint is to avoid shifting the burden to other endangered forests. Below is a brief description of a few ways that companies and consumers can find alternatives to purchasing wood from national forests or endangered forests.

Forest Stewardship Council (FSC): Currently, the FSC is the only credible certification system and does not certify national forests. FSC-certified products are not always readily available in stores, but consumers can help increase their supply by expressing a clear preference for these products when shopping for lumber, flooring, furniture, paper, and other wood products.

Wood efficiency in construction: Efficient practices and materials typically reduce the wood used in building a home by 15% to 30%. They can therefore help alleviate pressure on national forests. Approximately one-sixth of the wood delivered to a construction site ends up in the landfill. Reducing wood waste can also save builders hundreds of dollars. Builders who have adopted construction site waste reduction programs have saved $300 to $800 on a single job, according to the Natural Resources Defense Council's report, Efficient Wood Use in Residential Construction: A Practical Guide to Saving Wood, Money, and Forests.

The amount of wood logged from our National Forests is equivalent to one-third of the amount of wood products trash sent to landfills each year. Photo by Scott M. Biscuiti.

Reclaimed lumber: Reclaimed wood from buildings, barns, and railroad tracks is an excellent alternative for decks, frames, and windows.

Composite lumber: Growing in popularity, this method combines recycled plastics with wood. The end result is a wide variety of high-end products for decking, door, and window frames without the extra costs of traditional wood maintenance.

Non-wood alternatives: Along with using certified, recycled, or composite lumber, there is a growing list of non-wood options. In construction, lumber may be replaced with other materials such as stone, straw bale as structural components, or homosote, a chemical-free building material made out of recycled material that can be used for many structural materials.

Paper alternatives: Purchase products that have 100% recycled paper content or are produced using alternative fibers, such as agricultural residue, kenaf, or hemp. Reduce consumption of paper overall.

For more information, contact the following organizations:

Rainforest Action Network — www.ran.org, (415) 398-4404
ForestEthics — www.forestethics.org, (415) 863-4563
Dogwood Alliance — www.dogwoodalliance.org, (828) 251-2525
Forest Stewardship Council — www.fscus.org, (202) 342-0413

Prime tight-grained old-growth timber like this Douglas fir cut from the Biscuit logging project is growing scarcer and scarcer. Photo by Rolf Skar.

Heavy machinery causes erosion endangering high quality watersheds. Photo by Rolf Skar.

Conclusions

In uncertain times, it's often hard to appreciate the little things in life. America's national forests are one of those little things that our ancestors passed down to us and that our society often takes for granted, wrongly assuming that our government and the U.S. Forest Service (USFS) will protect them and that industrial interests won't exploit them. However, we ignore threats from the private sector not only at our own peril but also at our expense given the many ecosystem services and socio-economic benefits they now provide to citizens of our nation.

America's Endangered National Forests: Lumber, Landfill or Living Legacy? spells out a litany of current threats across the national forest system. Collectively, it represents an agency manipulated by political appointees, controlled by powerful economic interests and torn by a conflicting mission leaving it unable to respond to pressing ecological problems and unable to adapt to new social trends from an American public clamoring for more backcountry recreation opportunities.

The focus of NFPA's third "Endangered National Forests" report is on the consumer and the marketplace for wood products on national forests. Our primary thrust is to show the minor economic contributions from the logging program as compared to the growing influence and value of other national forest uses. By examining the declining wood products marketplace on national forests, we hope that you will gain a greater appreciation of all the economic values and social contributions they provide to us free of charge — so long as we take care of them! The profiles of our endangered, special mention and threatened national forests will give you more context and specific examples of where and how USFS policies place these public forests at risk.

Indeed, national forests are but one of many pressing issues that require our country to look inward instead of outward. Perhaps if we started doing more of this, many of our international problems would greatly diminish in scale and in importance. The National Forest Protection Alliance urges you to get involved in these issues and campaigns by contacting us or any of the organizations involved in the report. We also encourage consumers to use this report to get informed about how to purchase wood and paper products from sustainable sources.

Clearly there is much work to be done to protect some of the last remaining old-growth forests and pristine wildlands in the United States, to conserve some of the best fish and wildlife habitat and to restore some of the forest ecosystems ravaged by past industrial mis-management. It will not be easy to accomplish all of these worthy goals but all are essential to ensuring that our national forests can meet the environmental challenges and the socio-economic demands of the 21st Century.

Jake Kreilick
Endangered Forests Project Coordinator

Upper Right: American dipper. Photo by _____.

Lower Right: A pine and a cedar seedling regenerating naturally after the Biscuit fire; Siskiyou National Forest. Photo by Rolf Skar.

Left: The Wild & Scenic Illinois River is threatened by the nation's largest logging project; Siskiyou National Forest. Photo by Rolf Skar.

Glossary

Allowable Sale Quantity (ASQ): A measurement used by the USFS for the total quantity of trees that can be cut from a National Forest in one year.

BBF: A measurement of wood volume indicating one billion board feet.

Clearcut/Regeneration Harvest: A term used by foresters to signify that all of the trees in an area are cut leading to the establishment of a new forest.

Draft Environmental Impact Statement (DEIS) / Environmental Impact Statement (EIS): Required by the National Environmental Policy Act (NEPA) for federal land management agencies to analyze larger land management decisions/projects determined to have the potential to cause adverse impacts to forest resources or that would significantly alter the environment.

Ecoregion: A geographic area delineated by similar biological and environmental composition.

Ecosystem: A complex of organisms and their non-living environment all interacting through the flow of energy and materials.

Ecosystem Services: The social and economic values provided by natural ecosystems including but not limited to clean water, carbon sequestration, flood control, recreation, hunting and fishing opportunities and non-timber forest products.

Endangered Species Act (ESA): Passed by Congress in 1973, this landmark law established the right for the federal government to list species as endangered and to recover their populations.

Endemic: A localized distribution of an organism, usually indicating that it is unique to a restricted geographic area and found nowhere else.

Even-aged Management: An interchangeable forestry term for clearcutting; cutting all of the trees in an area.

Forest Plan: The document that legally directs the management of a National Forest for 10–15 years, developed through scientific analyses and public input.

Group Selection: A forestry term indicating the complete removal of a small stand or number of trees within a larger intact forest; a small clearcut.

Healthy Forests Initiative (HFI): The federal forest policy promoted by the current Bush Administration that ushered in major changes in forest rules and regulations designed to ease environmental analysis and limit public participation, particularly pertaining to post- fire logging and fuels reduction.

Highgrading: A forestry term for removing the largest and most commercially valuable trees from a forest while leaving the trees of lesser age and value.

Inventoried: An item that has been surveyed or catalogued, for example an "inventoried roadless area" is an area free of roads that has been surveyed and is part of an official USFS catalogue or list.

Management Indicator Species (MIS): A tool used by the USFS to determine viable populations of key species representative of ecosystem health and structure.

Mixed-Mesophytic: A cool, moist broadleaf forest type located predominantly along the Appalachians and is a relict of ancient forests that once covered much of the Northern hemisphere.

MBF: A measurement of wood volume indicating one thousand board feet.

MMBF: A measurement of wood volume indicating one million board feet equal to approximately 200 full log trucks.

National Forest Management Act (NFMA): Passed in 1976 by Congress, this legislation regulated the practice of clearcutting, but its impact today is largely felt due to the establishment of forest plans and citizen and judicial review.

Off-road Vehicles (ORVs): A generic term used to describe motorized recreation consisting of everything from dirt bikes and all-terrain quad vehicles to jeeps and four-wheel drive trucks.

Payments to Counties: In counties containing USFS lands, the federal government is required to give back 25% of its revenues from timber sales, grazing allotments, etc. for schools and roads.

Plantation/Tree farm: An area that has been converted for the agricultural production of trees, usually for industrial purposes, and requiring fertilizers and pesticides.

Prescribed Burning: The practice of intentionally starting fires for management purposes.

RARE II: Roadless Area Review & Evaluation II: The Forest Service conducted a second inventory of roadless areas on each national forest in the late 1970s culminating in a final report in 1979 designating slightly more than 60 million acres.

Reference Landscapes: A term used by land managers to compare heavily managed landscapes to those relatively undisturbed by human management.

Sensitive: A category used by the USFS for a species that is of concern because of its vulnerability to the adverse impacts of land management.

Shelterwood cut: A term used by foresters signifying that some trees in an area to be cut will be left to provide shelter for the next generation of trees.

Speciation: Any process by which new species of organisms form, for example a population of a plant species becomes isolated on an island and over time evolves into its own species.

Survey & Manage: A provision of the Northwest Forest Plan that required national forests west side of the Cascades to survey the status of sensitive and other indicator species.

Threatened: A species that is likely to become endangered in the foreseeable future.

Timber sale: The traditional way that the USFS has offered and sold wood on national forests. It involves the cruising of timber, sale and contract preparation, conducting environmental analysis, creating a draft and final decision, holding a bidding process and, following completion of the logging, reforestation and other environmental mitigation such as road obliteration and maintenance are required.

USFS: The United States Forest Service, an agency administered by the U.S. Department of Agriculture and responsible for the management of 192 million acres of federal public lands.

Uninventoried: An item that has not been surveyed or catalogued, for example an "uninventoried roadless area" is one that has not been surveyed or entered into an official USFS catalogue or list.

Credits

America's Endangered National Forests: Lumber, Landfill or Living Legacy? was written by the National Forest Protection Alliance and participating organizations.

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— For group contact information, please go to our website: www.forestadvocate.org —