FIRST SAVE OUR FIRST NATIONAL FORESTS! A Citizens' Primer to Stop U.S. Forest Service Destruction



by Howie Wolke

EARTH

I. AN AGENCY OUT OF CONTROL

The US Forest Service. To the uninitiated, the name conjurs up romantic images of diligent rangers roaming and protecting the woods they love. The Forest Service. To the unknowing, the image is that of a benevolent bureaucracy protecting wilderness and replacing the "rape and ruin" logging of the past with enlightened conservation. The Forest Service. It was their men of yesteryear - Aldo Leopold and Bob Marshall - who above all others invented what was to become today's National Wilderness Preservation System. The Forest Service. Shielded by the myth of stewardship, the illusion of competence, and the lie of alleged ecological responsibility

In the United States of America today, this agency is the primary force behind the destruction of wilderness ecosystems and healthy habitat. The Forest Service (USFS or simply FS) is the epitome of all that is wrong with bureaucracy, from the Bureau of Reclamation to the Kremlin. The "Freddies" (Forest Rape Eagerly Done & Done In Endless Sequence) must be stopped, before they complete their methodical ruination of our National Forests.

Harsh words? You bet! But the Forest Service has earned those words wherever it manages forests, from the Appalachian hardwoods to the giant conifers of the Pacific Northwest. The steady deterioration of fish and wildlife habitat; alarming reductions in genetic, species, and ecosystem diversity; drastic losses in the opportunities for solitude and quality recreation; and the ugly spreading cancer of bare eroding earth are the legacy that — unless thwarted — the Forest Service will leave us for centuries to come.

It is up to private citizens to stop the bastard children of Gifford Pinchot from reducing the public forests to tree farms laced with an unending profusion of roads and clearcuts. To the agency's plans to continue the carnage, the time has come not just to say "No" but to say "Hell no!"

II. HISTORICAL PERSPECTIVE

During the late 19th century, Americans gradually became aware of the wholesale "cut and run" destruction occurring throughout many of the nation's forests. As a result, in 1891, the US Congress passed the Reservation Act, which included the historic "Forest Reserve Clause." Under the Reservation Act, the President was given authority to withdraw lands from the public domain in order to protect them from the ravages of uncontrolled logging and mining. Under the Reserve Clause. Presidents Benjamin Harrison and Grover Cleveland began to withdraw public lands that would eventually become America's National Forests . The first large-scale forest withdrawal occurred on February 22, 1897, when outgoing president Grover Cleveland moved 21 million acres of western forestlands from the public domain into the Forest Reserve System. Later that year, under President William McKinley, Congress passed "the Organic Act of 1897," which in essence forbade clearcutting but encouraged small-scale selective logging in the Forest Reserves. In 1905, President Theodore Roosevelt signed an executive order which created the US Forest Service. Roosevelt then assigned the new agency to the US Department of Agriculture, and in 1907 he withdrew (under the Reserve Clause) 99 million acres from the public domain, thus creating the bulk of our National Forest System. Roosevelt's withdrawal was probably the single most important conservation act in the young nation's history. The first Chief of the US Forest Service was Gifford Pinchot.

Between 1905 and World War II, the National Forest System grew to nearly its present size. During this time, the Forest Service bureaucracy also grew, but logging remained a secondary use of the forests, a small-scale complement to watershed protection, recreation, and wildlife. (In 1924, Aldo Leopold persuaded the Forest Service to set aside the Gila in New Mexico as our first protected Wilderness.) Prior to World War II, the National Forests never produced more than 5% of the nation's annual timber supply, and individual tree selection was the predominant method of logging. After the war, though, the FS began to emphasize logging over all other forest uses. Between 1951 and 1969, the annual cut increased more than eight-fold, from 1.5 to 12.8 billion board feet. Clearcutting became the primary logging method and massive habitat destruction occurred throughout the public forests. For example, in Idaho's Payette National Forest during the winter of 1964-65, as a result of clearcutting and extensive roadbuilding along steep unstable slopes, at least 120,000 tons of sediment smothered the spawning beds of about 50,000 Chinook Salmon in the drainage of the South Fork of the Salmon River. Similar, although smaller-scale, disasters were occurring throughout the National Forests as new roads and clearcuts pushed ever deeper into formerly wild areas. By the 1970s, the FS had evolved into a bloated and intractible bureaucracy dedicated to logging and roadbuilding above all else. Today, in order to extract between 10 and 12 billion board feet of timber each year, the FS and its road engineers build about 10,000 miles of new road each year.

III. THE PRESENT

Recent laws have reinforced the Forest Service's destructive policies. Guided by the Multiple Use-Sustained Yield Act of 1960 and the National Forest Management Act of 1976 — the law that legalized the ongoing practice of clearcutting in the National Forests — today's FS is an agency under seige, plagued with internal strife as more and more citizens and lower level employees rebel against its single-minded dedication to development.

Despite the atrocities of the last four decades, within the National Forests remain many of America's unprotected (de facto) wildernesses. About 50 million acres of these sublime sanctuaries for evolution still survive in the National Forests, and it is the disposition of these lands - in other words, either protecting them as Congressionally-designated Wilderness or opening them to logging, roadbuilding and other destructive practices — that is the focus of our most intense public land controversy. Almost without fail, the FS opposes protection. In 1985, arrogant (now former) Forest Service Chief Max Peterson admitted that the Freddies were destroying about a million and a half acres of de facto wilderness each year! That is, roads, clearcuts, and other developments are annually laying waste to a wilderness over twice the size of Rhode Island! And the agency projects that holocaust to continue until well beyond the year 2000.

[ed. note: In this tabloid, 'Wilderness' with a capital 'W' refers to lands so designated by Congress; 'wilderness' with a small 'w' refers to roadless but undesignated wildlands. 'Roadless Area' when capitalized refers to areas officially inventoried by the Forest Service as roadless.]

In the late 1970s the Forest Service undertook its second nationwide study of roadless and undeveloped lands (second Roadless Area Review and Evaluation, or RARE II). The FS recommended for Wilderness designation a mere 15 million acres - primarily of rock and ice - out of approximately 80 million acres that remained wild. Since RARE II, Congress has passed socalled "Wilderness bills" for most states with substantial National Forestlands. (Idaho and Montana are notable exceptions.) These bills have "released" millions of acres of roadless wildlands to FS-sponsored development. Today the FS is completing its first round of Forest-wide "Land Management Plans" as required by the National Forest Management Act (NFMA). Every one of these plans proposes to open even more wild country to development, and every one of these plans, in effect, proposes to continue to turn diverse forests into even-aged monocultures and to bulldoze, develop, and destroy a magnificent domain shaped by 3.5 billion years of organic evolution. As the RARE II controversy fades, and as the first round of Forest Plans is completed (NFMA mandates revisions at 10-15 year intervals), conservation activists will be forced to find new ways to halt the entrenched juggernaut of National Forest habitat destruction. The Forest Service must be stopped!



IV. NATIONAL FOREST MANAGEMENT TODAY Multiple Abuse in the Public

Forests There are many good men and women

in the US Forest Service, particularly within the lower echelons of the agency. Unfortunately, because Forest Service promotion policy rewards budget building, agency loyalty, and a pro-development bias, decision-makers who have advanced through the FS hierarchy tend to be those most dedicated to the government's destructive version of multiple use management.

In the broad sense, multiple use includes outdoor recreation; habitat protection; restoration for rare, Threatened, and Endangered species; maintaining diverse gene pools; scientific study; and watershed and airshed protection; as well as grazing and logging. To most Forest managers, though, "multiple use" primarily connotes commodity production and energy-intensive motorized recreation - that is, logging, roadbuilding, livestock grazing, mineral development, resort development, and off-road vehicles (ORVs). Although the myth is of competent professional forest managers producing an array of goods and services while maintaining a quality forest environment, the reality is widespread ecological destruction. Here is a brief look at the reality of multiple use.

LOGGING: Although the National Forests only contribute about a fifth of the nation's timber production, logging is the activity around which virtually all other Forest Service actions revolve. As we shall soon see, the environmental consequences of the Forest Service timber program are indeed far-reaching. Unfortunately, most of the high productivity timbered areas in the National Forests have already been roaded and logged over.

Contrary to the myth of sustained yield management, most of these sites have been over-cut to the extent that they will not be able produce much additional timber for decades to come, until second growth stands are ready for "harvest." Therefore, in order to maintain an annual national "harvest" of 10-12 billion board feet, the FS must open new areas to logging each year. These remaining roadless areas and other remaining unlogged habitat islands tend to be high, steep, and inaccessible areas of inherently low productivity. Because of this, the federal government spends millions of dollars in subsidies each year to encourage timber companies to continue buying National Forest timber.

The subsidies allow private companies to profit by logging public forests that would not be profitable to log in a free market situation today. In turn, large-scale logging maintains the "need" for the huge bureaucratic corps(e) of timber foresters, road engineers, and associated employees. Indeed, the costs of road construction, administration, and reforestation (the Forest Service pays, either directly or indirectly for these activities) frequently exceed the actual value of the timber, resulting in huge net losses to the US Treasury. In 1985 alone, these "below cost" timber sales cost the American taxpayer about 600 million dollars. according to the Office of Management and Budget (OMB). Thus, taxpavers foot the bill for the destruction of our remaining National Forest wilderness. Even in the Yellowstone Ecosystem world-renowned for wildlife and recreation - below cost timber sales are common. In the six National Forests surrounding Yellowstone National Park (Bridger-Teton, Targhee, Shoshone, Custer, Gallatin, and Beaverhead), proposed Forest Plans would result in an annual net loss from timber management of \$22 million each year. Many of these below cost sales will be in unprotected roadless areas, Grizzly Bear habitat, and valuable recreation lands. Nationwide, logging is the primary threat to the ecological health of the National Forests. (Specific impacts will be discussed in the next section.)

Unfortunately, in spite of increasing public opposition to its fanatical emphasis on logging, the Freddies are now proposing not to decrease, but to *further increase* logging in the National Forests. According to a recent study by The Wilderness Society, proposed Forest Plans nationwide call for a 25% overall increase (over the average annual cut of recent years) in logging during the next decade!

ROADS: Today Forest Service roadbuilding costs the American taxpayer about half a billion dollars each year. The expense of roadbuilding across steep, unstable mountainous terrain is a major reason for the preponderance of below cost timber sales in the National Forests. Yet, the Freddies plan to at least double the current figure of 350,000 FS road miles during the next half century. One of their goals under the Renewable Resources Planning Act (1985 amendments) is to build another 580,000 road miles during that time. According to sources within the agency, at least 75,000 miles of these new roads will be bulldozed into National Forest roadless areas. Clearly, the Forest Service is on a roadbuilding binge of insane proportions.

Most National Forest roads are either funded by direct Congressional appropriation or by "purchaser credits." For 1988, Congress appropriated 172 million dollars for FS road construction. This massive direct subsidy to the timber industry funds the most destructive forest road projects. These roads are used to penetrate large roadless areas, disqualifying them from Wilderness consideration and opening even larger areas to more roads, clearcuts, off-road vehicles, poaching, and mineral exploration. Purchaser credit roads are also a very real, though indirect, subsidy to the timber industry. For most major timber sales the FS subtracts the estimated roadbuilding cost from the stumpage price of the timber, in exchange for the purchaser building the road. Roads built under this type of agreement are purchaser credit roads. Purchaser credits are used to finance most of the short spur roads to individual timber sale cutting units. Most years, purchaser credit road miles exceed those financed directly by Congress.

Roads, clearcuts, and other developments in the National Forests are annually laying waste to a wilderness over twice the size of Rhode Island!

OFF-ROAD VEHICLES: Many owners of 4-wheel drive "muscle wagons," jeeps, dirt bikes, mountain bikes, three-wheelers, snow machines, and various other ORVs claim some nebulous "right" to ride at will throughout the forests. ORVs have no redeeming value whatsoever. They produce no material benefit, waste fuel, destroy the outdoor experience for others, cause erosion, foul streams, disrupt soil relationships, harass wildlife, cost money to manage, and should be outlawed. Yet the Forest Service often promotes ORV use as a "legitimate multiple use." Today, almost all non-Wilderness National Forestlands are open to ORVs. According to a 1977 Council on Environmental Quality report, "ORVs have damaged every kind of ecosystem found in the United States."

MINERALS: Under the 1872 Mining



"It's the public participation that makes the National Forest planning process work." Cartoon by Robert Shetterly.



Law public lands are open to virtually unrestrained mineral exploration and development. This law covers "hard rock" minerals such as copper, lead, and zinc. Under the Mineral Leasing Act of 1920, exploration and development rights to fossil fuels and a few other minerals such as phosphate are leased to private companies at the discretion of the government. The public has little say in how and where mining and drilling activities occur. For example, during the late 1960s and early 70s, Forest Service and Bureau of Land Management (BLM) bureaucrats secretly leased about two million acres of Wyoming's Bridger-Teton National Forest to oil companies. (The BLM manages the sub-surface rights on much of the National Forestland.) Altogether, oil leases cover nearly 18 million acres of the National Forests. Roads, oil rigs, pipelines, powerlines, processing plants, stripmines, timber sales, poachers, ORVs and the loss of wildlife habitat — often in previously roadless areas - frequently follow mineral leasing. There is a growing consensus that our public land mining laws are in need of major overhaul.

RECREATION ADMINISTRA-TION: The National Forests provide more recreation user days than do all rock and ice predominate, the FS opposes Wilderness protection nearly everywhere in the National Forests. Agency plans to liquidate de facto wilderness are a matter of record at any of the eight Forest Service regional offices. For example, in Region 1 (Montana and northern Idaho) during the next 10 years, the FS plans to road, log, or otherwise develop 2 million acres of the 8.4 million de facto wilderness acres remaining. Substantial portions of roadless lands contiguous to the Bob Marshall, River of No Return, Selway-Bitterroot, and Anaconda-Pintlar Wilderness Areas are in grave jeopardy. So are portions of northern Idaho's Mallard-Larkins Roadless Area, Montana's West Pioneers and the Allan Mountain Roadless Area along the Montana/ Idaho border. Roads are being bulldozed and clearcuts are spreading in spectacular roadless areas such as these, throughout the National Forests . . . right now!

Of course, our remaining unprotected wildlands consist of far more than just spectacular, steep, recreation lands. They provide some of the last available habitat in the 48 states for Endangered and Threatened species such as the Gray Wolf and Grizzly Bear. They also provide refuge for species that require



Forest Service clearcut and logging deck on steep slope. Photo courtesy of Forest Watch magazine.

the National Parks combined. The Forest Service often argues that big

either the solitude of wilderness, the habitat provided by old growth forests,



THE MYTH OF MULTIPLE USE

According to the Multiple Use-Sus-tained Yield Act of 1960, the National Forests "shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." However noble and environmentally sound the idea of multiple use once may have seemed, it is becoming abundantly clear that in practice the idea hasn't worked. Behind the smokescreen of multiple use, the Forest Service has clearcut millions of acres and crisscrossed its domain with one of the most extensive road systems on Earth. The Freddies have clearcut along the western boundary of Yellowstone National Park; promoted a dirt bike race in prime Griz habitat on Montana's Flathead National Forest; clearcut the perimeter of Mt. St. Helens shortly after its 1980 eruption (in order to preclude Congress from designating a large National Monument); logged two designated Wilderness Areas in East Texas under the guise of insect control; supported James Watt's failed attempt to open designated Wildernesses to oil leasing; clearcut sacred Indian religious sites throughout the Northwest; and applied carcinogenic herbicides to logged over lands in order to kill deciduous species that compete with the preferred (by timber cutters) conifers. Multiple use has damaged watersheds, eliminated entire populations of rare species, destroyed recreation opportunities on millions of acres for backcountry users, reduced Elk and other game populations throughout the West, and promoted the development of a non-sustainable National Forest-dependent timber industry. Multiple use is anthropocentric and encourages bad forestry. Indeed, the very word "use" carries with it antiwilderness connotations. Multiple use does not recognize the intrinsic value and rights of ecosystems, species, subspecies and populations.

Earth First! suggests that our National Forests instead be managed for multiple benefits based upon the intrinsic value of evolving natural systems, species, subspecies, and populations. Wilderness — and indeed, healthy habitat in general — produces the benefits of pure air and water, diverse gene pools, abundant game, refuge for rare and imperiled species, and opportunities for quality recreation and scientific study, to name but a few. The idea of intrinsic value would provide a philosophical basis for allowing some parts of the planet to simply be - to evolve unfettered from human constraints. Of course, just changing the name of the beast will not in itself change its nature. But our public lands - in particular our National Forests are a long-term investment in the health of our portion of the planet. If we are to have both healthy living systems and sustainable use we must radically alter both the language and the substance of modern public land management.

roadbuilding budgets and below cost timber sales are necessary because they "benefit" various forest users. The bureaucrats often cite recreation and administration as beneficiaries of continued wildland industrialization. Yet almost nobody — except the loggers and bureaucrats — want the roads and clearcuts. Wildlife biologists, hunters, fishers, picnickers, hikers, skiers, horseback riders, even many small-scale independent loggers are all saying "Enough!"

WILDERNESS: In 1936, legendary conservationist Bob Marshall conducted the first National Forest wilderness inventory. Marshall identified 150 million de facto wilderness acres within the National Forests. Although Congress has protected over 32 million National Forest acres under the Wilderness Act of 1964, since Marshall's inventory the Forest Service has presided over the destruction of more than 60 million acres of wilderness. As we've seen, the Freddies are now liquidating about 1.5 million acres of de facto wilderness each year. Except where extremely steep slopes, alpine tundra, or or both. The future of species such as Fisher, Pine Marten, Wolverine, Lynx, Mountain Goat, Northern Flying Squirrel, Northern Bog Lemming, Northern Goshawk, Northern Spotted Owl, Harlequin Duck, Pileated Woodpecker, Red-cockaded Woodpecker, Elegant Trogon, Rough-skinned Newt and various anadromous salmonoids depends in no small measure upon the future of our remaining unprotected National Forest wildlands. And in a larger sense, the continued evolution of many species of vertebrates depends to a great extent upon wilderness preservation, in the National Forests and elsewhere.

RANGE: Like most other public lands, the National Forests are plagued by severe overgrazing. Nationwide, fewer than 35,000 cattlemen depend upon the public lands for at least a portion of their operation, and all the public lands produce less than 2% of America's red meat supply! Even in the 11 western public lands states, only 12% of the forage used by livestock comes from the public lands. Yet over half of the National Forestlands are currently allotted for cattle and sheep grazing.



The Destruction of

FACTS WE ALL SHOULD KNOW

*The National Forest System consists of approximately 190 million acres. That is slightly smaller than the combined land area of Texas and Louisiana.

*Over 100 million acres of the National Forests are *already* roaded, logged, or otherwise developed to the extent that they have no remaining undeveloped tracts of 5000 acres or larger. (The Wilderness Act generally requires an undeveloped tract to be 5000 acres or larger in order to qualify for protection.)

*Only 17% of the National Forest System (just over 32 million acres) is designated Wilderness. Another 50 million acres are roadless and undeveloped but vulnerable to FS mismanagement.

*The Forest Service is destroying about 1.5 million acres of this de facto wilderness each year.

*There are already over 350,000 miles of roads in the National Forests, not including other federal, state, and county rights of way. That is roughly equivalent to 14 times the circumference of the Earth.

*Less than 2% of the land area of the contiguous 48 states is protected as Wilderness.

*About 20% of the nation's wood fiber production comes from the National Forests.

*The Forest Service employs over twice as many civil engineers nationwide as it does wildlife biologists.

*At least 75,000 miles of new road will be built in the remaining National Forest de facto wilderness, if proposed National Forest Management Plans are enacted.

*The Forest Service is building almost 10,000 miles of new road each year, at an annual cost to taxpayers of about half a billion dollars!

*For Fiscal Year 1988, Congress appropriated \$172 million for Forest Service road construction. These "public works" roads are in addition to the purchaser credit roads which are another huge subsidy to the timber industry.

*The Forest Service clearcut a quarter million acres of forest in FY 1985.

*In 1985, below cost (and environmentally destructive) timber sales cost the American taxpayer approximately 600 million dollars, according to the OMB.

*In 1986 the Forest Service put 512 timber sales up for bid in Congressionally-released Roadless Areas. This does not include sales in roadless lands that were excluded from RARE II, as these lands don't legally require Congressional "release" for development. It also does not include illegal timber sales in Roadless Areas not released by Congress. The FS has on many occasions attempted to conduct sales in areas not released, although Earth First! and other environmental groups have at least delayed many of these sales.

*Since 1936 we've lost almost two acres of National Forest for each acre Congress protected. since passage of the Wilderness Act in 1964, we've still lost about an acre of wilderness for each acre protected by Congress. *There are about 100,000 trail miles remaining in the National Forests. That's less than one-third of the total road miles, and in recent years National Forest trails have been neglected due to the Forest Service's focus upon roadbuilding. Trail mileage has decreased sharply. *As of September 30, 1987, oil and gas leases covered 18 million National Forest acres. Over half the leased acreage is in Wyoming, Idaho, Colorado, Utah, and Nevada.





*At the end of 1987, Forest Service grazing allotments for cattle and sheep covered 101,372,771 acres.

merica's National Forests



The future of species such as Fisher, Marten, Wolverine, Lynx, Mountain Goat, Northern Flying Squirrel, Northern Bog Lemming, Northern Goshawk, Northern Spotted Owl, Harlequin Duck, **Pileated Woodpecker**, Red-cockaded Woodpecker, Rough-skinned Newt and various anadromous salmonoids depends in no small measure upon the future of our remaining unprotected National Forest wildlands.



GLOSSARY OF FORESTRY EUPHEMISMS

Harvest: To chop down trees; to log; to level forests; to clearcut. The term is used to falsely equate natural forest communities with crops such as corn or wheat.

Even Aged Management: A timber management system designed to replace the natural forest community with a single species monoculture of trees that are all about the same age. Another term for clearcutting. Sanitation Cut: Clearcutting to rid

the forest of natural pathogens or insects such as the Mountain Pine Beetle, with which forests have evolved for millennia.

Type Conversion: A general term for destroying a naturally diverse forest and replacing it with a monoculture. Clearcutting is the first step. Then the Freddies employ some combination of bulldozers, napalm, fire, or herbicides to prepare the remaining soil for a single species even-aged plantation. The FS routinely does this in the South and in the East, where fast growing pines are more profitable for loggers than are diverse hardwoods or mixed forests. Also, the complete destruction of a natural forest.

Site preparation: The use of bulldozers, napalm, fire, or herbicides to prepare the ground for a monoculture.

Rotation: The age at which a forest stand is clearcut.

Multiple Use: Multiple Abuse: logging, mining, roadbuilding, grazing, resort development, and motorized recreation. The religion of all Forest Service employees who wish to advance in the bureaucracy.

Mitigation: A token attempt to justify a destructive action. For example, to justify a proposed timber sale in Grizzly habitat, the FS might order some of its employees to reuse their styrofoam coffee cups, in order to save the ozone.

Access: (n) A road. (vb) To build a road.

Resource: A piece of the natural environment that can be sold for profit.

Resource Manager: A bureaucrat whose continued existence depends upon the continued exploitation of "resources.

Forest Protection: Spraying dangerous chemicals on the woods to kill native insects such as the Spruce Budworm. Also, bulldozing firelines, building roads, and dumping water and chemicals on lightning-caused fires. Also, clearcutting the forest to prevent the above from occurring.

The Process: A clever FS device designed to wear down opponents of multiple abuse through endless meetings, hearings, negotiations, documents, and financial stress. This Freddie tactic works.

Mature Forest: A timber stand that has reached its peak annual increment of growth, and therefore is ready for "harvest." A forest that has reached ro-

tation age; a forest that, according to the Forest Service, needs to be clearcut.

Overmature and Decadent: An old growth forest. Actually, the concept of multiple use, the US Forest Service.

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V. THE IMPACT OF LOGGING AND ROADS

CLEARCUTTING: Clearcuts look terrible — many resemble a war zone — but aesthetics are only a small part of the picture. Clearcutting, the predominant mode of timber production in the National Forests, devastates forest ecosystems. In a clearcut, all trees are removed from a large area, typically 30-40 acres but sometimes much larger.

The goal of clearcutting is two-fold. First is the immediate goal of selling a large quantity of timber. Second, the Forest Service replaces the natural forest community, which often consists of various tree species of different ages, sizes, and genetic composition, with an even-aged monoculture of trees of the commercially preferred species. Slash burning and herbicide spraying are often utilized to prepare the abused site for the new forest monoculture.

Clearcutting always causes erosion and can degrade water quality in a variety of ways. Sometimes it causes mass slope failure with disastrous consequences, as it did in early 1965 in the South Fork of the Salmon River in Idaho. In essence, clearcutting is genocide. In many forests, the post-clearcut monoculture consists of young trees which have been carefully selected for certain genetic traits such as rapid growth, straight boles, and resistance to natural forest pathogens. The longterm ramifications of this intentional reduction in genetic diversity are unknown, but most likely will include reductions in the ability of forest species to survive and adapt — that is, to evolve.

Clearcutting reduces habitat and eliminates entire populations of species that are already rare, Threatened, or Endangered. Because forests in the late stages of ecological succession constitute a much lower portion of the total forest environment than ever before (because of human activity), species such as Spotted Owl, Goshawk, Red Crossbill, Three-toed Woodpecker, Marten, Fisher, and Northern Flying Squirrel are becoming increasingly rare. These species, known to ecologists as "K species," are being replaced by the generally much more abundant "R species," those which rapidly colonize logged over or otherwise disturbed habitats. White-tailed Deer, Striped Skunk, and Savannah Sparrow are examples of R species.

After all the trees are removed, workers use bulldozers, chainsaws, fire, or chemicals to level the remaining vegetation. The actual tree-felling destroys nests, roosts, dens and escape cover for forest animals, and kills outright many of the slower mammals, reptiles, amphibians, and invertebrates. The newborn of faster animals such as deer are also killed. Slash burning, which often follows the logging, fries many small animals such as chipmunks.

In areas characterized by large blocks of contiguous forest, clearcuts fragment habitat, leaving only "habitat islands" of undisturbed forest, which are often too small to support the normal array of deep forest species. Clearcuts and roads impede migration, thus reducing gene flow. This leads to inbreeding depression, genetic drift, and other genetic problems within the habitat island. Top trophic level carnivores and other species that are already rare are particularly vulnerable to local extinction due to habitat fragmentation. Forest ecologists are only now beginning to understand some of the more subtle effects of clearcutting. For example, most North American forests depend upon a symbiotic relationship between various species of soil fungi (mycorrhizal fungi) and the roots of trees and shrubs. Mycorrhizae improve uptake of water nutrients, and forest growth is stymied when the fungi are are absent. Clearcuts destroy mycorrhizal relationships, and in some areas eliminate populations of animals which spread mycorrhizae spores. In heavily clearcut landscapes it may take many years for mycorrhizal relationships to become reestablished. Mature forests are extremely efficient at nutrient cycling. Generally, even on unproductive sites, forests slowly build up a nutrient capital in their biomass, so tightly recycling nutrients that at any given time, the soil is relatively sterile. Natural disturbances such as lightning, fire, wind, and forest pathogens create openings for early suc-

cession species (R species) without removing much of the nutrient capital from the site. Clearcutting, on the other hand, removes much of that capital. Although there is a paucity of studies, it seems probable that as the Forest Service increases its emphasis on "intensive" forestry (unnatural genetic selection, herbicides, frequent thinnings, and short rotations), the nutrient capital on many sites, particularly those of low natural productivity, will be depleted. Some scientists are beginning to suspect that acid rain is only one culprit in the dying forests of Germany. After many centuries of intensive tree culture, nutrient and mycorrhizae depletion may be partially to blame for the forest death (Waldsterben).

The Freddies plan to at least double the current figure of 350,000 Forest Service road miles during the next half century.

Throughout the National Forests, there are thousands of cut-over acres in which attempts at regeneration have failed. There, the environmental effects of clearcutting are tremendously magnified. And throughout the National Forests, clearcuts continue to spread like a cancer. Even in the diverse eastern hardwood forests, where natural processes almost never produced evenaged single-species stands, the Forest Service utilizes clearcutting and monocultures as a primary method of timber management.

The above are just a few of the unfortunate results of clearcutting. The ramifications of clearcutting are at once blatant and subtle. Moreover, they vary depending upon geography, aspect, elevation, soil, bedrock, and forest type. Due to the complexity of natural forest ecosystems, the consequences of drastic alterations such as clearcutting can never be fully understood. Clearcutting does not emulate any natural process. There is no biological justification for the practice. The motivation for clearcutting is purely economic. Clearcutting destroys the natural diversity of forest ecosystems and should be outlawed.

OTHER KINDS OF LOGGING: "Seed tree" cuts and "shelterwood" cuts are slight variations in the clearcutting theme. Seed trees are isolated mature trees of desirable phenotypes left by the



loggers to re-seed the clearcut. (Phenotype is the actual expression of genetic traits within an individual, population, or species.) Shelterwood is a sparse overstory of such trees; the overstory is removed when a new forest stand has been established.

On the other hand, selection logging may, in some cases, be an ecologically acceptable method of tree cutting. It is not, however, a panacea for bad forest management. Individual tree selection is usually the most benign form of logging, but this technique is as much an art as a science, and few Forest Service foresters today are capable of practicing it. Individual tree selection is practiced in many privately owned forests and woodlots. It requires foresters to be in the woods, because trees to cut must be identified individually. Group selection is the practice of logging a small group of trees at one time, thus producing a small opening in the continuous forest. Many of the ecological problems associated with clearcutting are reduced by utilizing individual tree selection or group selection, because selection logging maintains a forested environment at all times.

Generally speaking, where logging is deemed an appropriate land use, selection is preferable to clearcutting. But even where selection is employed, there are important differences between a managed forest and a natural one. For example, even in the best managed forests, snags, fallen logs, and brokentopped trees are rare, and therefore so

THE SECOND SECON

is wildlife that requires such habitats. Erosion increases and soil structure is impacted by skidders and other heavy machinery used to remove the logs. Furthermore, all forms of logging, including selection, require extensive road networks. As we shall soon see, FS roadbuilding is probably the greatest threat to the ecological health of most National Forests. The big question, then, is where is logging appropriate. Selection is better than clearcutting, yes, but major impacts do result from the practice. The National Forests produce only a small portion of the nation's timber supply, but these lands contain a disproportionate share of habitat for big game; habitat for rare, Threatened, and Endangered species; healthy watersheds; and above all, wilderness. Logging may be a legitimate use of some public lands, but overall the contribution of the National Forests to the ecological health of the planet far exceeds the value of their timber.

ROADS: Most National Forestlands are steep and mountainous. Therefore, most National Forest roads follow valley or canyon bottoms, destroying riparian habitats, or they are bulldozed across precipitous slopes, creating ugly eroding gashes across the landscape. Forest roads probably cause more environmental damage than any other forestry activity.

On the average, each mile of forest road directly obliterates five acres of forest. Thus, the 350,000 miles of existing National Forest roads are roughly equivalent to an unreclaimed stripmine of 1,750,000 acres! Worse, each mile of road opens many square miles of forest for ORVers, poachers, and slob hunters. Clearcuts and other logging methods, with all of their ecological impacts, usually follow roads. Roads make it easier for humans to reach sensitive wildlife habitats that formerly were protected by difficult or long access. Roads transform de facto wilderness into managed forest, thus putting more and more recreation pressure on remaining unroaded areas, protected and not. Roads obliterate and replace trails, often by following the same drainage bottoms. Thus overall trail mileage continues to shrink in the National Forests. This results, again, in more crowding on remaining trails. Road construction is the alprit in the demise of America' trails. Road construction always causes erosion; streams are often clogged with sediment when spring runoff or heavy rains occur. Sediment pollution destroys spawning beds, increases water temperatures, promotes algae blooms, and encourages non-native and "rough" fish to become established. Roads fragment habitat, creating barriers to migration for various species (see above), and roads eliminate populations of wilderness-dependent species such as Grizzly, Lynx, Wolverine, Harlequin Duck, Mountain Lion and Mountain Goat. Roads also reduce populations of Elk, Moose, and other game. Roadbuilding and logging destroy de facto wilderness. Although the Forest Service admits it is destroying about 1.5 million wilderness acres each year that is, 1.5 million acres within roadless areas of 5000 acres or more — this figure understates the problem. In truth, any road built through unroaded habitat, however small, is damaging. Even tiny roadless enclaves within heavily roaded terrain provide security for many kinds of wildlife. The reduc-



tion or elimination of various wildlife populations means an overall reduction in biodiversity on all three levels: ecosystem, species, and genetic. That means a reduction in the stability of forest ecosystems and in their ability to recover from natural and humancaused disturbances. Roads also provide avenues for exotic species to invade wild habitats. And roads kill directly, too. Many of the estimated one million animals killed annually on roads in the US die on Forest Service roads.

Forest Service apologists deny that the agency is on a roadbuilding binge; they claim the roads are merely a necessary support for various kinds of forest management, such as clearcutting (one begins to wonder if the FS realizes there is any other kind of forest management). But FS roadbuilding has increased each decade since World War II: it averaged 5200 miles per year in the 1960s, 8500 miles per year in the '70s, and now nearly 10,000 miles of new road each year. (This includes all new roads on the National Forests, both purchaser credit and public works roads, but not upgraded pre-existing roads. In addition to building new roads, the FS "improves" thousands of miles of roads each year.) Webster's defines "binge" as "an unrestrained outburst." Much like the alcoholic who rapidly increases his consumption of whiskey with no regard for tomorrow, the FS is on a binge. Public works roads in National Forests cost taxpayers \$20,000 to \$50,000 per mile, sometimes much more. That's a high price for habitat destruction.

Clearcuts destroy mycorrhizal relationships, and in some areas eliminate populations of animals which spread mycorrhizae spores.

Although it would be impossible to name all of the de facto wildernesses threatened by roads, almost everyone who lives near a National Forest can cite the destruction of a favorite wild area due to roads and logging. Oregon's North Kalmiopsis Roadless Area is familiar to many. The Allan Mountain (MT & ID) and Salt River Range (WY) Roadless Areas are two of many I've come to know, to love, to defend, and to mourn as their wildness is lost. Even the National Forest Roadless Areas in the eastern states are not immune from this Forest Service binge: the large Wild River-Kearsarge area in New Hampshire is being devastated by Freddie

roading and logging.

OLD GROWTH: To the typical industrial forester in the Forest Service, a very old forest characterized by huge living trees, numerous snags (standing dead trees), abundant deadfall (fallen logs), and occasional broken top trees and cavity trees (live rotting trees) is "overmature and decadent." That is, the annual increment of marketable wood growth is very low, and the forest should be "harvested" and replaced with a faster growing young stand of trees.

But to a biologist, forests characterized by such components are "old growth," and today are invaluable. In pre-Columbian America, old growth forests were the rule, not the exception. Particularly in the East and the Northwest, old growth forests dominated the landscape, sheltering an incredibly diverse array of plants and animals. Old growth forests were somewhat less abundant in the northern Rockies where more frequent lightning-caused fires resulted in a more even mix of young and old forest stands. But even there, mature and old growth forests dominated much of the landscape. Pockets of old growth were even common in the central and southern Rockies, along the western slope of the Sierra, and in parts of the deep South.

Today, logging and other developments have destroyed most of America's old growth forest. For example, on the western slope of the Washington and Oregon Cascades, biologists estimate that at any given time about 90% of the pre-Columbian forest was mature or old growth, with 10% of the forest in young stages of lightning-induced ecological succession. Today, the figures are almost exactly reversed: only 10% of the forest is old growth (25% of the National Forest acreage west of the Cascade crest is old growth), and 90% is either logged forest or recent clearcut.

As we've begun to see, old growth provides primary habitat for many plant and animal species, and these are generally the species that have already become very rare. The Forest Service's continued emphasis on old growth logging is drastically reducing the diversity of species' gene pools, and in some cases threatens the survival of those species. In western Oregon, for example, at least 45 species of terrestrial vertebrates will not thrive in young forests which lack the major physical components (see above) of old growth. Among North American animals which depend primarily upon old growth are: Marten, Fisher, Northern Flying Squirrel, Chickaree, Red Tree Vole, Goshawk, North-Spotted Owl, Olive-sided ern Flycatcher, Pileated Woodpecker, and



Clearcut Lodgepole Pine in Deerlodge NF, Montana. Logger removed poles, posts and cordwood but left decks of sawlogs for lack of market. Photo by EA Hanson, USDA Forest Service, courtesy of Forest Watch magazine.

Ivory-billed Woodpecker (now extinct in the US). Even many species not primarily dependent upon old growth, benefit greatly from its presence.

Although some game managers whose main concern is producing "crops" of game animals, such as Whitetailed Deer and Ruffed Grouse, still refer to old growth forests as "biological deserts," the enlightened biologist knows better. So does almost anyone who has walked through the giant forests, immersed in an ancient sea of life, awed by the scale — in size and time — of the primeval forest. Because of its human-caused scarcity, it is more important than ever that we protect *all* remaining old growth, wherever it survives.

WILDERNESS: THE MAJOR VIC-TIM OF FOREST SERVICE LOG-GING AND ROADING: Even as wilderness-dependent species decline under the onslaught of wildland industrialization, efforts to reintroduce extirpated top carnivores will fizzle. Can we once again see wolves in Yellowstone and in the Gila? Can there be Gray Wolves and Grizzlies in the River of No Return? Caribou in the Selway? Wolverine in the Pemigewasset? Cougar in the Appalachians? The destruction of de facto wilderness in these regions dooms present and future biological communities.

As wilderness and old growth depen-

dent populations dwindle, biodiversity is reduced, and the rare are replaced by the common. As genetic diversity and species diversity plummet, forest ecosystems will continue to become less stable, more vulnerable to human disturbances and environmental stochasticity, and more prone to invasion by exotic species such as Spotted Knapweed (an invader especially common in Montana).

As National Forest wilderness declines, more watershed disasters will occur (floods, landslides, etc.), more poachers and slob road hunters will destroy game, and more slob snowmachine trappers will penetrate the woods. Populations of already rare furbearers such as Marten will drop farther.

With each passing year, the destruction of a million and a half acres of de facto wilderness further barricades the very process of evolution by eliminating and impoverishing gene pools, in other words, by reducing genetic diversity. This in turn eliminates the possibility that geographically isolated populations of vertebrates will adapt, and evolve into new species.

If there is such a thing as a "right," then wilderness and all of its components have a right to exist and evolve. Wilderness is our best hedge against ecological calamity, and against the destruction of life processes which we haven't even begun to understand.







MODERNE MAN

VI. VISION: A BIOCENTRIC PROPOSAL FOR THE NATIONAL FORESTS

Forget multiple use. Scrap the National Forest Management Act and replace it with a new charter for the public's forests. Fire the road engineers and force the big timber companies to practice sustained yield on their private lands, where they belong. In their present form, the US Forest Service and their system of forest mismanagement cannot be reformed. The agency, and indeed our entire National Forest System, needs an overhaul!

Although there's a growing movement to somehow reform National Forest management in the US, there is little consensus, so far, on how this should be done. Part of the problem is that there has been little attempt to actually envision the National Forests as they should be. Specifically, we should ask, how much Wilderness should there ultimately be? How much logging? How many road miles? And more basic, what would constitute a true biological (not political!) "balance" between preservation and production? To devise a plan, we need a goal.

The following proposal would radically transform the National Forests, from heavily-logged, roaded, and eroding tree farms to refuges for biodiversity that allow some compatible human uses. The proposal includes both specific goals and some general courses of action that would help to achieve such goals. For example, it proposes firing all upper level Forest Service employees, reducing by 75% the bureaucratic employment budget, and mandating a 90% reduction in timber harvest.

Other critics of the Forest Service have their own ideas. For example, forest economist Randal O'Toole proposes marketizing the Forest Service. He would eliminate financial incentives to sell timber where it is not profitable to sell it, and by instituting recreational user fees, would put recreation on equal economic footing with logging. On the other hand, some critics of the Forest Service suggest scrapping the agency altogether, and still others simply suggest putting biologists, not foresters, in charge. All of these proposals have some merit and some inherent flaws. For example, O'Toole's proposal is based upon economic, not intrinsic, value. It would not promote biocentric management in areas where logging really is economically sound. O'Toole's proposal would entail better forestry than that of today, but the improvements would fall far short of the goals

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envisioned by this proposal.

There may be a number of ways in which the program proposed here could be achieved. As would be the case with the O'Toole proposal, major legislation will be necessary, but once the following framework is established, management will be simpler and agency decisionmakers will be much freer to practice the *art* of forestry. Of course, this proposal represents a radical departure from the status quo of ecological destruction and massive bureaucracy, and therefore will require a major sustained public outcry both *against* existing land abuse, and *for* this alternative plan.

1. Repeal the Multiple Use-Sustained Yield Act; repeal the Knudtson-Vandenberg Act;* and repeal the National Forest Management Act. A new National Forest Charter will replace these terrible laws. In the Preamble, biocentric guiding principles will be stated, and recognition given to the multiple benefits derived therefrom.

*(As O'Toole has rightly pointed out, by allowing the FS to retain a portion of timber sale receipts for various management activities, the K.V. Act provides an incentive to sell timber, even when the overall sale loses money. This is due to the natural bureaucratic tendency to seek to maximize operating budgets).

2. Fire all Forest Service employees from the district ranger level up. Reduce total agency employment budget by 75%. The bureaucracy is too big, and is top heavy with bureaucrats who subscribe to the multiple abuse religion. Give some of the lower level people a chance.

3. Require all decision-makers to be This includes district biologists. rangers, Forest supervisors, planners, and regional foresters.

4. Grant immediate protection to all

roadless areas. Too little wilderness remains. What does remain must be spared from the 1.5 million acre per year juggernaut.

5. Designate two-thirds of total National Forest acreage as Wilderness. A little over 80 million National Forest acres are still wild today. (This is about 44% of the 190 million acre National Forest System; 32 million of these acres are designated Wilderness, and a little over 50 million are de facto wilderness.) To achieve this goal, wilderness restoration must occur on over 40 million acres of currently roaded and developed lands. The long-term National Forest Wildernesses will then cover 125 million acres, with 65 million acres devoted to multiple non-wilderness benefits (note: multiple benefits, not use).

6. Complete restoration of 100,000 existing road miles. This would reduce the National Forest road system to a "mere" quarter of a million miles. Road

obliteration would employ many and would operate in conjunction with #5 above.

7. No new roads will be allowed. 8. No off-road vehicles will be allowed.

9. No new ski areas or other large resorts will be allowed.

10. Annual timber harvest will be reduced across the board by 90%. A legislated one billion board foot ceiling on annual National Forest timber sales would send the big mills packing, but leave enough commercial timber for small local operators, post and pole cutting, and firewood. (The Freddies currently sell 10-12 billion board feet annually. The Sierra Club and Wilderness Society haggle over whether the Forest Service should cut 11 billion or 9.5 billion board feet!)

11. No clearcutting will be allowed. Only individual or group selection logging will be permitted. Group selection will be defined as the complete removal of trees on areas of one acre or less.

12. There will be no logging within 150 feet of riparian habitats; no herbicides, insecticides, or fungicides will be used.

13. Extirpated native species will be reintroduced. Gray Wolves, and Caribou will be returned to the River of No Return/Selway-Bitterroot, wolves to the Greater Yellowstone and Gila Ecosystems, Wolverine to New Hampshire's White Mountains, and so on.

14. Domestic livestock grazing will be eliminated.

15. Natural, lightning-induced fires will be allowed to resume their historic role. Except where natural fires threaten private property, let them burn! Fires recycle nutrients, reduce fuel loads and thus reduce the potential for catastrophic crown fires, and improve habitat for many species of wildlife. Western America's forests evolved with fires for millennia, and some species and ecosystems simply wouldn't survive without them. Smokey the Bear was wrong! (Human-caused fires are another matter altogether and in most cases should be squelched.)

16. All remaining old growth forest will be protected.

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FORESTS FOR THE FUTURE

The plan outlined above will lead to a healthy, diverse, vital, and produc-tive National Forest System. If the plan is implemented now, by the mid 21st century many abused lands will have recovered. Ugly eroding road gashes will be covered with stabilizing vegetation. Damaged riparian zones will again be productive. Streams will be clear, and salmon will again spawn. Because clearcutting will be outlawed, streams will flow higher later in the dry western and northwestern summers, and dessicated springs and seeps will reappear.

Wildlife populations will prosper, particularly those of species that are now rare: wilderness- and old growth-dependents. Elimination of livestock competition will result in enough game both for predators such as Gray Wolves, Mountain Lions, and Grizzly Bears, and for human hunters (regulated).

A stable forest road system will avoid sensitive habitats and riparian zones. It will provide access to scattered areas of carefully managed timber producing stands of trees, not clearcuts. The forests will not be plantations. Forest roads will also provide access for firewood gathering, post and pole cutting, and roaded recreation such as picnicking and car camping. Because twothirds of the National Forest System will ultimately be Wilderness (largely Wilderness Recovery Areas in the meantime), roaded recreation will mostly be a "wilderness threshold" activity. Furthermore, for three major reasons, National Forest Wilderness will really be wild - much more so than today. First, extirpated species of wildlife will have been reintroduced. Second, there will be much more wild country, hence a much lower user density than now. And, third, individual Wildernesses will be larger, with their core areas further from roads. Today's timber mill-dependent communities will diversify and depend more upon recreation. The elimination of nearly 20% of the nation's timber supply will drive prices up, and force an increase in paper recycling and in efficiency of wood utilization. Smaller homes and businesses will become the rule, further reducing the USA's huge appetite for the world's resources. Most important, though, the National Forests will again be forests. They will be reservoirs for genetic diversity, and places where living things can continue to evolve, relatively free of the heavy hand of humanity.

ANOTHER VISION FOR THE FUTURE

The proposal for biocentric forest management that we've outlined in this tabloid assumes that we'll continue to have National Forests, and in some altered form, the US Forest Service. But numerous public land activists correctly point out that many major public land management problems pertain to all public lands, and are not endemic to the National Forests. They also argue that nothing short of a complete restructuring of American public land management can correct the radical land management abuses prevalent today. Therefore, some activists envision one single management agency (e.g., Department of Biodiversity and Wilderness) whose primary mission is to promote the maintenance and restoration of natural biodiversity on the public land. Within that context, a sister agency (or, perhaps, a sub-agency) would be charged solely with the restoration and protection of a greatly expanded National Wilderness System.

Within the new public domain, all major kinds of commodity production, such as logging and mining, would be outlawed. The multiple benefit principle would be accentuated by large Wilderness and Wilderness Recovery Areas. All human uses would be subservient to the primary purpose of protecting and restoring healthy ecosystems throughout the public lands. Certainly, there may be drawbacks to such a proposal (concentration of power within one agency, for example). Furthermore, even our proposed overhaul of the National Forest System will no doubt encounter formidable political opposition. Thus, some public land activists will continue to choose the path of least resistance. That is, they'll advocate minor "politically realistic" reforms for the Forest Service. And the plunder will continue. Unfortunately, the very tenets of National Forest (and public land) management in the US are biologically and ethically wrong. Radical change won't come easily. Nonetheless, it is clear that America's current system of public land management simply does not work. These wondrous natural places deserve something much better. Let's begin to work now, not only for a radical overhaul of the National Forest system, but for sane biocentric management of all of our public lands.

WHAT YOU CAN DO

1. Organize a demonstration at your local Forest Service office on April 21, John Muir's birthday. Any action, even if you only have one or two people and a couple of posters, will add to the pressure on the Freddies. Do it!

2. Write your Congresspersons and tell them that current forest management is not working in the National Forests. Support this 16-point proposal and specifically tell them to allow "no more roads" (cut the FS roadbuilding budget to zero) and to designate all remaining roadless areas as Wilderness. Also tell them that if a 90% reduction in National Forest logging cannot be achieved, you would support the elimination of all logging in the National Forests.⁴ (Address senators at US Senate, Washington, DC 20510; representatives at US House of Representatives, Wash., DC 20515.)

3. Bring a hammer, whenever you walk in the woods.

4. Testify at hearings for no-compromise forestry positions such as in point proposal. Get

7. Become active in a local Earth First! group and/or in your local Sierra Club or Audubon chapter or state-wide wilderness group. Encourage these other conservation groups to support the Earth First! National Forest Biocentric Management Plan and to engage in stronger action to preserve our National Forests.

8. Explore your local National Forest — the wild places and the abused ones. The most effective activists know firsthand of what they speak.



people," not just known Earth First!ers, to do so, also.

5. Demonstrate at hearings and meetings to publicize Forest Service ecocide. Publicize the alternatives too.

6. Distribute this tabloid to the news media, the Freddies, Congress, other conservation groups and to individuals. (Order additional copies from Earth First!, POB 5871, Tucson, AZ 85703.) Prepare for a long battle, because radical change won't occur overnight.