CALIFORNIA FOREST PROTECTIVE ASSOCIATION

1127-11th STREET • SUITE 534 • SACRAMENTO, CALIFORNIA 95814
PHONE 444-6592

January 11, 1972

Much has been said about soil erosion resulting from logging, its impact on fish habitat and water quality, etc. Erosion rates due largely to natural causes have been attributed to logging.

In an attempt to set the record straight we have had the attached document prepared. It may put the matter in better perspective.

John Callaghan

John Callaghan
Secretary-Manager

(ANOTHER HOAX EXPOSED)

- IS LOGGING REALLY KILLING THE LAND? -

The Campaign to Capture Over 30,000,000 Acres of Roadless National Forest Land

SENATOR CHURCH: I understand you to say that if current practices are sustained, that the forests will be incapable of regeneration after the second or third cut is completed?

MR. CURRY: In some cases, after the first cut.

SENATOR CHURCH: In some cases after the first?... Let me say, Doctor, that you give very alarming testimony.

--Proceedings of hearings before the Subcommittee on Public Lands, Senate Committee on Interior and Insular Affairs, April 6, 1971. Part I, p. 160.

Congress and the American public are currently being subjected to a barrage of truly alarming charges. The accusers declare that logging is destroying the nation's forest soils. They charge that nutrients are being leached from logged-over lands at such prodigious rates that those soils will soon become unable to grow more trees. They further charged that erosion on logged-over lands is so excessive that the soil on these lands will shortly be utterly gone. These charges are being made before Congress and in the press by the Sierra Club, by Friends of the Earth and by various groups and individuals allied with them.

The accusers charge that the U. S. Forest Service has "betrayed the American people" and that the agency is dominated by "sawlog foresters". They are calling upon Congress to reduce timber harvesting drastically, to stop clearcutting--the harvest of all trees standing within a given block in the forest--and to clamp rigid forestry rules made in Washington on all of the nation's public and private timberlands.

This must be done, they are saying, because "many of the forests these soils sustain are essentially non-renewable" and much of the American landscape is "doomed to the same fate that befell the great forests of Dalmatia under the Greek and Roman axes, the Cedars of Lebanon and the

English Midlands." The fearful comparisons with Dalmatia and Lebanon appear frequently in their literature.

Conspiracy Suggested

The accusers imply the existence of a conspiracy of silence among soil scientists in government and related institutions concerning this alleged ongoing soil destruction, and they call for a full-scale, nation-wide fact-finding effort on a crash basis "administered by non-governmental and non-industry-related agencies and personnel." They proclaim the necessity that citizens' organizations take up the task of chemically monitoring the effects of logging on soil in order that the truth be exposed. One of their principal spokesmen, Robert Curry, told a congressional committee, "I believe that such semi-quantitative citizens" data should be adequate to force full-scale investigations, where appropriate, of ongoing practices by an agency independent of the U. S. Forest Service, the Department of Agriculture and the Soil Conservation Service, all of whom have technical limitations or biases."

What limitations? What biases? Is logging really killing the land?

This report will analyze each of the charges made. It will summarize the research data bearing on the issues and present a bibliography of the source data. It will also explore the motivation and timing of those who are orchestrating the campaign of charges.

FOREST HISTORY: AN ECOLOGY OF DISTURBANCE

In order to examine the charges being made from an ecological perspective, it is important at this point to look back at natural history over the eons of time before today's logger appeared and ask how nature herself managed the forest. Every investigation has shown a history of fire. Forest ecologists have identified this history as an "ecology of disturbance." Lightning was the principal natural agent, touching off forest fires that periodically "clearcut" areas ranging from patches of an acre or two on up to huge areas extending over many square miles.

Brooks (1925) stated that Earth experiences 44,000 thunderstorms a day and that some 1,800 storms are in progress at any given moment. The U. S. Department of Commerce (1966) estimates that these storms produce, collectively, 100 cloud-to-ground lightning discharges each second around the glove. As a result, lightning annually causes some 10,000 ot 15,000 forest fires in the United States. Meanwhile, an acre of forest annually converts solar energy into vegetable matter which has an energy equivalent of 300 gallons of gasoline. This growing reservoir of combustible energy is stored as timber, becoming the equivalent of 3,000 gallons of gasoline in a decade. The organic mantle of the forest floor also accumulates three to four tons of litter per acre per year in the North Temperate Zone, on the average, while decompositions rate is about half of that. This buidup of fuel virtually insures that a lightning strike--perhaps accompanied by dry wind on a hot summer day--will wipe out part of the forest. Thus, areas of the forest cleared of trees are an historical part of the natural ecology of a forest.

Trees That Require Disturbance

Many kinds of trees have depended on fire historically to maintain their species. Douglas fir on the Pacific Northwest, for example, requires open sunlight for survival of its seedlings. Douglas fir seedlings will not grow in the dense shade of their parents in an old Douglas fir forest, and such forests are gradually taken over by shade-tolerant trees such as spruce and hemlock until fire again interrupts the process and permits the Douglas fir to renew itself on the site. Because fire periodically wiped out large blocks of the Douglas fir forests and the surrounding trees were able to cast windblown seed into these sunlit openings, the species has perpetuated itself as the dominant ground cover throughout its region.

Lodgepole forests throughout the West provide another example of a tree historically dependent upon fire for survival of its species. Seed cones on lodgepole pines generally will not open except under the intense heat of fire. Lodgepole is one of the pioneer trees to first take over the site of a fire. If another forest fire does not occur again within a half century, other species of trees gradually move in and take over the site from the lodgepole.

Additional species of trees that benefit from fire include the aspen forest type in the Lake States, the spruce-fir type in the Northwest and some of the pine types in the South. Nature has maintained these forests by clearing and renewing them periodically with fire, wind, insects and diseases.

One investigator puts the average occurrence of fire in forest of the northern Rocky Mountains at less than 150 years, with cycles ranging from perhaps 10 to 400 years in any given stand. By contrast, the periodicity of fire in the chaparral types of southern California is estimated at about nine to 15 years.

Clearcutting Replicates Fire

Modern man has succeeded in controlling major losses to most forest fires, and his harvests of blocks of timber by clearcutting maintain the periodical ecological rhythm of clearing the forest once fulfilled by fire and other natural agents. Clearcutting, in short, replicates the natural event. Clearcutting is the only way in which many of the most important timber species can be maintained without forest fire. If clearcutting is stopped in such timber types, accumulation of fuel will eventually reach a point where no amount of human effort can contain the fire that will inevitably occur.

Such forests, then, face one of two inescapable destinies: Clearcut them, or they will burn.

If one accepts 150 years as the average interval between clearing fires or clearing by windstorm, insects or disease for any given acre in most forests throughout natural history, then that acre would have been denuded of trees 1,000 times in the past 150,000 years. The critics of logging have not been able to explain why clearcutting and regeneration of a new forest by man should produce significantly different nutrient changes in the soil than repeated clearing by any one of these natural agents.

Yet this is a most significant question.

WHAT ABOUT NUTRIENT CYCLING?

Information about soil nutrients is available from 10 experimental forests in the United States, three in the East and seven in the West. Study areas range from undisturbed, 450-year-old forests to treatments in which an area was completely denuded and kept in that condition.

It is notable that the accusers have done little or no field research of their own on soil nutrients. They hang their case principally on their own interpretation of research done at one of these locations, the Hubbard Brook Experimental Forest in New Hampshire. Yet the Hubbard Brook experiment they cite was entirely unlike any normal logging operation, and the scientists who themselves conducted the studies there have protested that their results cannot be applied indiscriminantly to logging operations as the accusers have done. They protest because, first, all trees were felled and left in place and the watershed was then sprayed with chemicals repeatedly for three years to prevent normal return of vegetative cover to stabilize the soil and, second, the forest at Hubbard Brook stands on a podsol soil--fragile, infertile, acidic soil that leaches and erodes easily--largely confined in the United States to the New England region. Much of the nutrient capital in the soil at Hubbard Brook is confined to the surface layer. When revegetation was prevented for a long period, nutrients were readily released through both erosion and biological activity. Neither the treatment nor the site, then is comparable to other timber-harvest areas.

Nutrient Cycle Explained

In any forest, nutrients are constantly entering and leaving the soil. Nutrients enter through the release of minerals from rock by decomposition and weathering, through deposit from the atmosphere and through nitrogen fixation by certain plants. Storm systems gather nutrients such as sodium, chloride and sulphate over the oceans and deposit them as they move inland. Snow and rain are by no means pure H_2O; they contain a wide range of chemical compounds ranging from volatile elements and heavy metals to complex organic compounds (Gambell etal). Animals, falling litter, dead plants and residues of trees from fire or logging return organic matter to the forest floor. All of this material undergoes gradual biological action that ultimately releases nutrients.

Nutrients are continually being removed from the soil, even in undisturbed forests, by natural erosion, by leaching and by uptake in plants. The annual amount of nutrient being added and the amount being withdrawn make up the "nutrient budget." It may be remarked in passing that since the beginning of time there has everywhere always been a small constant outflow of nutrients from land to sea. This is, in other words, normal and is, of course, what makes the oceans salty and rich in nutrient content.

The amount of nutrients a soil can retain depends on inherent soil characteristics such as texture, depth, mineralogical composition, ion-exchange capacity, existing supply of nutrients and the amount of organic matter. The soil acts something like a giant battery, generating a reciprocal transfer of ions--positively and negatively charged atoms of chemical and mineral matter--between solutions and solids in the soil.

In general, soils contain a generous supply of nutrients, though the exchangeable nutrient reserve available to plants, or free to move, is a small fraction of the total nutrient reserve. The available reserve of potassium, for example, ranges between 1 and 2 percent of the total soil reserve of potassium, one of the lowest percentages among various nutrients. When disturbance of the vegetative cover of the forest--such as from fire or logging--upsets the existing nutrient budget and causes an increase in outflow of nutirents over input, the soil is able to call upon its stored exchangeable reserves to carry it over this temporary period until new vegetation turns the nutrient outflow downward again.

Critics Project Temporary Rates

The essential fallacy in the charges being made by the various accusers is that the figures they quote showing wide imbalancesof nutrient outflow over nutrient input are for temporary periods generally lasting less than two to three years.

The experimental area at Hubbard Brook was maintained in a completely devegetated state for three years as part of a study aimed at maximizing water yields. During the first year after treatment, losses of six kinds of soil nutrients ranged from two to 53 times greater than on a nearby undisturbed area. These are the losses on which the accusers base their case. The bedrock underlying Hubbard Brook is practically impermeable, obviously accelerating the rate of nutrient loss because of larger

quantities of drainage water passing through the system as well as to the cessation of uptake of nutrients by plants. However, two years after the use of herbicides to prevent vegetation was stopped, losses of nitrate had decreased six-fold to about the same level as in several other cutover forest areas nearby in a similar stage of vegetative development.

Analysis of other study areas shows a similar return to normal when new vegetation heals the scars of disturbance.

At the Coweeta Hydrologic Laboratory in North Carolina, a hardwood stand was clearcut and left on the ground, as in the Hubbard Brook study. At Coweeta, however, herbicides were not used to prevent regrowth of vegetation. Seven years after the cutting, researchers actually discovered a net increase in calcium. They found that the small losses in magnesium, potassium and sodium were even less than the ongoing losses of those nutrients from a nearby mature hardwood forest.

A study of nutrient loss after timber harvest and slash burning in Oregon showed that nitrogen loss from these activities averaged 4.6 pounds per acre, compared with 0.16 pounds per acre in a nearby undisturbed watershed. Three years after logging, however, loss of ammonium-nitrogen and potassium had returned to about the same levels found in the undisturbed watershed. Loss of calcium and magnesium had declined from the maximum reached the second year after logging. The maximum nitrate content of streamflow from the area was less than three parts per million (ppm.). Federal standards for drinking water quality allow up to 45 ppm.

Nutrient Loss Temporary

In another Oregon study made by the Federal Water Quality Administration after roadbuilding and tree harvesting, the investigator concludes in a progress report: "Both the concentration and load values then suggest that roadbuilding and tree harvesting on these small Alsea River watersheds may have enriched the streams slightly, but probably only temporarily, by causing small to moderate increases in the plant nutrients, potassium, total phosphate and nitrate."

In western Washington, scientists at the University of Washington have studied nutrient movement through a forest soil influenced by tree removal and the addition of fertilizer. They concluded: "The forest soil

considered in this study is not subject to leaching losses in spite of its high porosity and low exchange capacity. Only small amounts of nitrogen, phosphorus, potassium and calcium were removed beyond the effective rooting depth during the 10-month period (after treatment)...Removing the forest vegetation increases the forest-floor decomposition as assessed by the elemental release. However, little of this additional release was lost from the soil profile..."

Major soil research has been conducted in the United States since 1948. Studies of nutrient cycling began about 10 years ago, and work continues to go forward. Some 35 individual studies of nutrient cycling in forest ecosystems are underway in 18 states. Participants include several universities, the Forest Service, Agricultural Research Service, Atomic Energy Commission and the Tennessee Valley Authority. A major multi-disciplinary research effort is also being conducted under the United States International Biological Program.

It is a rather striking fact that not one of these organizations is supporting the essential charge made by the accusers that forests in most areas of the United States "cannot be sustained beyond one to four cuttings, after which the soils of our national forests will be unable to support merchantable sawtimber..."

Nutrient Reserves Large

Summarizing all of the research findings available, Dr. Robert F. Tarrant, principal soil scientist at the Pacific Northwest Forest and Range Experimental Station, told the Senate Subcommittee on Public Lands that "on the basis of currently available information, we find no drastic or irreversible depletion of forest soil nutrient reserve caused by timber removal. Nutrient outflows are small compared to the total nutrient reserve in the soil." He said nutrient outflows from disturbed study sites were not high except at Hubbard Brook --and this was a drastic experiment, not a forest-management practice.

His position was supported in a statement to the committee by Dr. Stanley P. Gessel, professor of forest soils at the University of Washington. Gessel said "there is little evidence to support the contention...that the environmental quality and productivity of the nation's forest lands are rapidly deteriorating. In fact, there is considerable

factual evidence to the contrary."

Tarrant has also pointed out that where soil loss is not a factor, any depletion of nutrients through repeated timber cutting could be restored by applying fertilizer or soil-ameliorating vegetation. Crop rotation, so successful in agriculture, would be possible in some forested regions of the country if needed.

However, part of the answer to the question of reversing nutrient losses in soil revolves around the return of organic matter to the ecosystem. There are thousands of examples in the East in which wornout farmland was abandoned, its soils depleted of nutrients and organic content by repeated cropping, which grew up into forest that restored the soils with heavy annual additions or organic matter. Many of the white pine forests of New England and the loblolly and other southern pine forests of the South grow on old farmsteads. In some instances, these lands have again been returned successfully to agricultural cropping, thus providing evidence that forests improve the fertility of the soil.

Gessel said there is evidence that, in some forest environments, soil such as podsols, for example, deteriorate with undisturbed forest succession and that a drastic change is actually needed for regeneration or for successful forest growth.

Foreign Comparison Cited

Centuries of experience with repeated clearcutting in Japan and Germany have produced no site degradation. Vigorous forest crops are still being grown with no evidence of withering of growth rates. There have been two instances, one of soil deterioration in Germany and another of reduced growth in second-generation pine in Australia. These instances were the result of moving spruce from its native habitat to unsuitable sites in Germany and introducing exotic pines onto poor eucalyptus sites in Australia.

How about the prediction that U. S. forests will suffer the same fate that befell forests of the Dalmatian coast in present-day Yugoslavia? John T. Keane points out that the coastal Dalmatian forests were growing

on a limestone plateau--known as karst terrain--overlying primarily dolomitic limestone. Such terrain is rarely found in forest regions of western North America.

And the Cedars of Lebanon? Malik Basbous of the Lebanese Department of Agriculture, who heads up a program to restore those lands, says lack of trees is not due to any inability of soils to sustain them but rather to generations of grazing by goats that ate the seedlings.

Why would anyone claiming to be a soils expert attempt to frighten legislators and the public with such unfair and unfounded comparisons? Can it be attributed to ignorance? To malice? Or to something else? We shall return to this matter.

WHAT ABOUT EROSION?

Erosion is a word that evokes a variety of mental images. The term denotes the wearing away of the land surface by the agents of water, wind or ice. Two broad types of erosion are generally recognized--geologic, which has been going on from time immemorial under undisturbed, vegetated conditions, and accelerated, which occurs when vegetation is removed by such agents as fire, logging, roadbuilding, etc. Soil formation goes on continuously at a slow but constant rate, while erosion is sporadic. Rainfall characteristics, variation in soil erodibility, steepness of terrain and the amount of plant cover and ground litter are the basic factors affecting surface erosion. All of these elements vary so greatly from one place to another that broad generalizations must be made carefully.

Yet Robert Curry, principal soil spokesman for the accusers, testified before the Senate Subcommittee on Public Lands that "erosional evidence gives us a finite life for our forests in all but the flat deep soil areas of the southeast...Thus, by erosion alone, we are rapidly and directly and surely turning our western states into Dalmatias."

In support of this, Curry cites erosion in the Eel River Basin of northern California and conjectures that it must be due to logging. He says that, based upon suspended loads in streams, there will be total

soil loss in 400 years.

However, Eugene Kojan of the U. S. Forest and Range Experiment Station at Berkeley notes that the Eel and Mad River basins are undergoing rapid geologic uplift--known as tectonic uplift--and that this is causing rapid downcutting of those coastal streams. He says much of the material transported in those rivers is fractured rock fragments from shear zones through which the streams are cutting, and he cites soil creep as being responsible for several hundred tons of sediment made available to the streams in each square mile.

A 1970 report based on analysis of 1,800 field plots, published by the Soil Conservation Service and the Forest Service in cooperation with the California Department of Water Resources, showed that as of 1966 the suspended sediment in streams of the Eel and Mad river basins due to sheet and gully erosion attributable to logging impacts is an amount just equal to that produced by the black-tailed deer resident in the watersheds. It said nearly two-thirds of the sediment is coming from streambeds and banks and 25 percent from landslides. It added that 16 percent of the landslides may be due to man's activities such as logging and roadbuilding and said roadbuilding contributed one-half of 1 percent of total erosion in the basin. The report concluded that the major portion of the sediment yield was found to result from natural geologic erosion.

This evidence suggests that Curry's conclusions on the Eel are out of touch with reality.

Youthful "Relict" Redwoods

Curry further surmises that "the coastal watersheds of California were deforested of redwoods naturally, probably by repeated fires, about 10,000 years ago and could not reproduce rapidly enough to save the soil from subsequent erosion...Relict stands, like those on the San Francisco peninsula, once cut are doomed, since they are creating their own microenvironment and retaining their own soil." Curry might be surprised to learn that most of the millions of redwoods growing south of San Francisco are not ancient virgin trees still hanging on. They are second-growth trees that have grown back following early-day logging.

Although it is undeniable that logging generally results in some temporary increase in soil erosion and stream sedimentation, the fallacy of the accusers' charges is that they again seize upon the temporary situation and project it into infinity. Analysis of representative research from around the country shows instead that, in general, a logged-over site returns to its normal stability as soon as it greens up under new vegetation.

Poor Roading Identified

Studies of sedimentation following logging road construction in a small watershed have long been carried on at the H. J. Andrews Experimental Forest in the Cascade Range of Oregon. In 1959, 1.65 miles of road were constructed in a steep, 250-acre forested watershed. Runoff from the first rainstorms after road construction carried 250 times the sediment found in an adjacent, undisturbed watershed. Within two months, however, sediment content had diminished to levels only slightly above those measured before road construction.

Studies abroad have shown much the same results. A study in Germany found sheet erosion losses of 8.01 tons per acre per year immediately after clearcut logging, but this dropped to only 0.15 tons per acre per year five years later, after reestablishment of vegetation.

One of the earlier studies of the effect of logging on stream sediment was conducted at Coweeta Hydrologic Laboratory in North Carolina beginning in 1946. Road construction practices were poor, and during logging stream sediment content averaged 94 ppm and the maximum was 3,500 ppm, respectively. The increased sediment content was traced largely to erosion from both the surface and backslope banks of logging roads.

Eroding skidroads were also the major source of stream sediment in a logging experiment at Fernow Experimental Forest in West Virginia. The roads were located and constructed so poorly that erosion from them brought stream sediment content as high as 56,000 ppm. On the other hand, skidroads planned and built carefully contributed only negligible amounts of sediment. This study also showed that the impact on water quality was greatest during and immediately after logging and that recovery of vegetation substantially decreased erosion within a year.

Under some conditions, logging may have no measurable effect on erosion rates. No reduction in infiltration rates was measured when an oak-hickory forest in the Rose Lake watershed of southern Michigan was clearcut and, consequently, there was no increase in erosion or surface runoff.

Fires Cause Erosion

Forest fire itself also causes a temporary acceleration of erosion just as logging does, and it will be remembered that fire has been a periodic visitor to most forest land for hundreds of thousands of years. Modern man's success in controlling most forest fires has been beneficial to soils in reducing the erosion caused by fires. In California, one study investigated the effects of burning on runoff plots in the woodland-chaparral-grass type of the Sierra Nevada foothills. For the nine-year duration of the experiment, the unburned plots had no measurable erosion, plots burned twice lost an average of over four tons per acre, and erosion rates for annually-burned plots averaged 113 tons per acre. The study attributed erosion largely to decreased infiltration rates due to almost total destruction of litter.

Another study in southern California found fire-caused erosion increases of four to 17 times the pre-burn rates.

In Arizona, researchers measured erosion losses from a steep slope following a 1942 fire in the Sierra Ancha Experimental Forest. Losses for only one year totaled 32 to 165 tons per acre. A later study there reported total soil loss from a 60-acre burn to be about one acre-foot.

Erosion Can Be Controlled

Soil scientists generally conclude that roadbuilding rather than logging itself is the principal cause of accelerated erosion in timber-harvest operations. C. T. Dyrness, soil scientist for the Pacific Northwest Forest and Range Experiment Station, says "erosion can be significantly controlled, however, by exercising care in timber-harvesting operations and by judicious design and construction of access roads and skidtrails."

Forest lands achieve a dynamic equilibrium between soil-forming processes and erosional processes that tend to balance out over long

geologic periods. Timber harvesting is only one of a number of events that may disturb forest land. Other events such as fires, snow avalanches, hurricanes, earthquakes and glaciers usually cause greater interruptions to the soil-building process than do timber harvests. Although in any extensive human activity such as logging it is possible to find instances of poor judgment and bad practice, many other examples may also be found in which logging has produced no discernible effect on soil loss.

The accusers have attempted to mislead Congress and the public by taking figures for the temporary increase in stream sedimentation during and immediately after logging and then basing long-range predictions on them as though these were now permanent erosion rates. In no instance have they admitted that timber-harvest areas stabilize again relatively quickly as new vegetation develops. They have advanced the Eel River basin as a horror story of logging destruction, withholding the key information the geologic uplift was the principal factor in soil disturbance.

WHAT'S BEHIND THIS CAMPAIGN OF CHARGES?

It should be clear at this point that the charges that logging is destroying the land are based on a web of distortion of the available scientific research and on gross generalization from isolated events. One may fairly ask why the Sierra Club and its allies have organized this campaign.

The answer lies in the Wilderness Act of 1964. Passage of the act by Congress automatically established a Wilderness System of 9,100,000 acreas made up of 54 national forest units that had previously been administratively designated by the Forest Service itself as wilderness, wild or canoe areas. The act further set a period of 10 years--or until September, 1974--for review of more than 150 more wilderness proposals totaling another 60,000,000 acres for possible addition to the Wilderness System. That time will soon be up.

If all of that acreage should be classified as wilderness, the Wilderness System may then represent more than 3 percent of the nation's

total land area. This would be a domain of vast size, a great plum for backpackers when one considers that only 3/10th of 1 percent of our population are able or willing to penetrate the wilderness areas. In other words, a numerically insignificant, highly intellectual group would be beneficiary to ten times its fair per capita share of a finite resource--land. Similarly, the vast bulk of our people would be deprived of receiving benefit from the natural resources and recreational opportunities within the designated set-a-side areas.

But it is not enough. In a wilderness report to its members, the Sierra Club suggests a "guideline might be that at least twice the area now devoted to...urban use could be considered to constitute adequate wilderness reservation." (There were approximately 55,000,000 acres in urban areas, highways, road, railroads and airports as of 1964.) Other wilderness groups are said to be considering proposals that about 30,000,000 acres in Alaska be included in wilderness.

How to get it? The lands designated for wilderness study are administered primarily by the Forest Service, the National Park Service and the Bureau of Wildlife and Fisheries. Though the National Park Service is lagging behind schedule in completing its review, the preservationists anticipate relatively little resistance from motorized camper groups and other non-hiking recreationists to their efforts to maximize the amount of National Park land designated for wilderness classification without roads, campsites or other recreational amenities, even though this may perpetuate the present congestion of National Park facilities for the vast majority of park visitors.

Forest Service Singled Out

The national forests administered by the Forest Service present a somewhat more difficult problem to the preservationist groups. Some of them complain that the Forest Service is too pure in insisting that areas to be studied for possible inclusion in the Wilderness System be truly untouched by the works of man. They also complain that the Forest Service often excludes from review areas valuable for minerals and timber growth, even though it frequently substitutes larger adjacent areas.

Then why not try to discredit the Forest Service management and thereby stir up public support for legislation that would with one stroke force all national forest land without roads into a wilderness-study classification? This game plan could sweep upwards of 30,000,000 acres of roadless land into a study category, not counting additional millions of acres in Alaska--truly a great prize to capture when compared with the approximately 5,000,000 acres of primitive areas in national forests remaining on schedule for wilderness study.

That is exactly the goal at which the present campaign is aimed.

The legislation to accomplish this is Senate Bill 1734, a proposal that would set up federal forestry regulation of the nation's forest lands. Tucked away in it is a provision that all roadless areas of national forest land 3,000 acres or more in area and roadless areas of only 1,200 acres if adjacent to any present wilderness or primitive area shall automatically be given primitive-area status. The legislation would provide another 10-year period for review of those lands for addition to the Wilderness System by Congress.

It is finally apparent that the preservationist groups participating in the campaign to raise fears that the national forests are being wantonly destroyed are prepared to go to any lengths to achieve their ends. The U. S. Forest Service is made up of a professional corps of dedicated people with a proud tradition of public service stemming from its founder, Gifford Pinchot. Yet the preservationists are quite ready to destroy the integrity of that service and its people in the eyes of the public with their cries of "betrayal" if it will help them capture the roadless lands.

They are quite ready to manipulate soils research data to make it appear to support their charges against the Forest Service.

They are quite ready to mislead Congress, the press and the public into fearing that the nation's forest lands are being destroyed under Forest Service management.

Vast Area Affected

At least one-fourth of the commercial forest lands administered by the Forest Service could be affected by this campaign. Withdrawal of this acreage from the planning base for sustained-yield growth and harvest of trees would cause an immediate reduction of timber yield from the national forests of at least one-fourth of the current annual yield. In actuality, withdrawal of these lands would, due to statutory requirements of sustained yield, cause the current yield to be cut in half, at least in the early years. This would come at a time when the nation is searching for ways to provide more low-cost housing for its poor and to intensify timber growth to meet the rising need for all paper and wood products as U. S. population grows.

Whether or not one believes that more land should be added to the regions already preserved by Congress as perpetual wilderness, it does not follow that all forest land which does not now happen to have a road into it should, by that single criteria alone, be withdrawn automatically into a primitive category. Public needs and broad social goals must be considered in establishing the nation's land-use policies, and opportunities should be provided for all recreationists as well as other user groups to be heard. The present campaign of fear and distortion now being waged is intended to circumvent the needs of non-hiking recreationists, who constitute all but 1 percent of national forest recreationists, and the needs of the country for other values from these public lands.

CONCLUSIONS

Charges by the Sierra Club and its allies that logging is destroying the land do not hold up under analysis. The ecological history of most forest land is one of periodic disturbance by fire or other natural agents that wiped out old stands of trees and made way for the new. Man has largely controlled fire and has substituted logging, thus replicating a necessary natural event for removing old growth to make way for new. Studies show that temporary increases in erosion and nutrient outflow accompany both the natural and manmade disturbances, but these conditions quickly return to normal as soon as the disturbed site becomes revegetated. To make their case seem plausible, the accusers have seized upon loss rates

during and immediately after timber harvest, before stability is regained, and have projected these rates into infinity as a new norm.

Nutrient outflows immediately following timber removal are small in comparison to total nutrient reserves in the soil. Most erosion associated with logging is actually caused by roadbuilding, and serious loss does not occur when due care is exercised to prevent it.

The effort to discredit Forest Service management methods is thus seen as part of a campaign to capture all of the roadless land in the national forests by frightening Congress and the public into passage of sweeping legislation that would withdraw all such land into primitive areas in one single stroke.

(BIBLIOGRAPHY TO BE ADDED)