

New Government Plan For National Forests Generates a Debate

Conservation groups and timber industry express skepticism.

By JON R. LUOMA

In the weeks since the Forest Service adopted what it calls "a more ecologically sound approach" to managing the National Forests, debate has flourished over whether the policy amounts to a major philosophical shift, a barely modified form of business as usual, or something in between.

The agency has given few specific instructions to foresters about how to accomplish the new goals, and Forest Service officials acknowledge that in many ways any application of the concept, much of which is based on relatively new discoveries and theories, will amount to an experiment.

In announcing the new policy on June 4, Dale Robertson, the Forest Service's chief, emphasized that clear cutting would be curtailed in National Forests. But he outlined a far more ambitious proposal in a memorandum to his staff, ordering that an experimental program called "New Perspectives," tested in the last three years in a few forests, become more standard practice systemwide. He dubbed the plan "ecosystem management."

Under the plan, logging would continue on much of the 191 million acres of National Forests, but it would be managed according to new theories about how to make replanted forests more like natural ecosystems and less like tree farms.

"If all you want us to do is manage the forests intensively for wood, we can do that," said Dr. Harold Salwasser, who has directed the New Perspectives program. "But this policy says that the amount of timber that can be harvested has to be in balance with the desired ecology for the forest."

But the lack of specifics from Mr. Robertson allowed different groups to interpret the policy differently.

Disagreement on Impact

"Questions are being raised about whether this is a lot of rhetoric allowing business as usual or a major sea change," said Dr. Gerry Gray, vice president for resource policy for Americans Forests, a conservation group. "We tend to think that, given the new information coming from sci-

ence, the agency really is going to move towards an ecological management approach."

Others are more skeptical. Some environmentalists said they believed that the announcement would lead to few real changes, and industry representatives expressed concern that it could lead to sharp logging reductions in National Forests.

Many of the concepts involved in the new proposal came from the work of a team of university and Forest Service scientists working at the H. J. Andrews Experimental Forest in Oregon during the last two decades.

By the mid-1980's, the Andrews team had concluded that wholesale clear cutting, followed by plantings of farm-like "crops" of a single species was a poor replication of natural cycles in which forests regenerate themselves.

In particular, the researchers found that fires and other disturbances in old-growth stands virtually always left behind some standing trees, as well as tons of fallen timber.

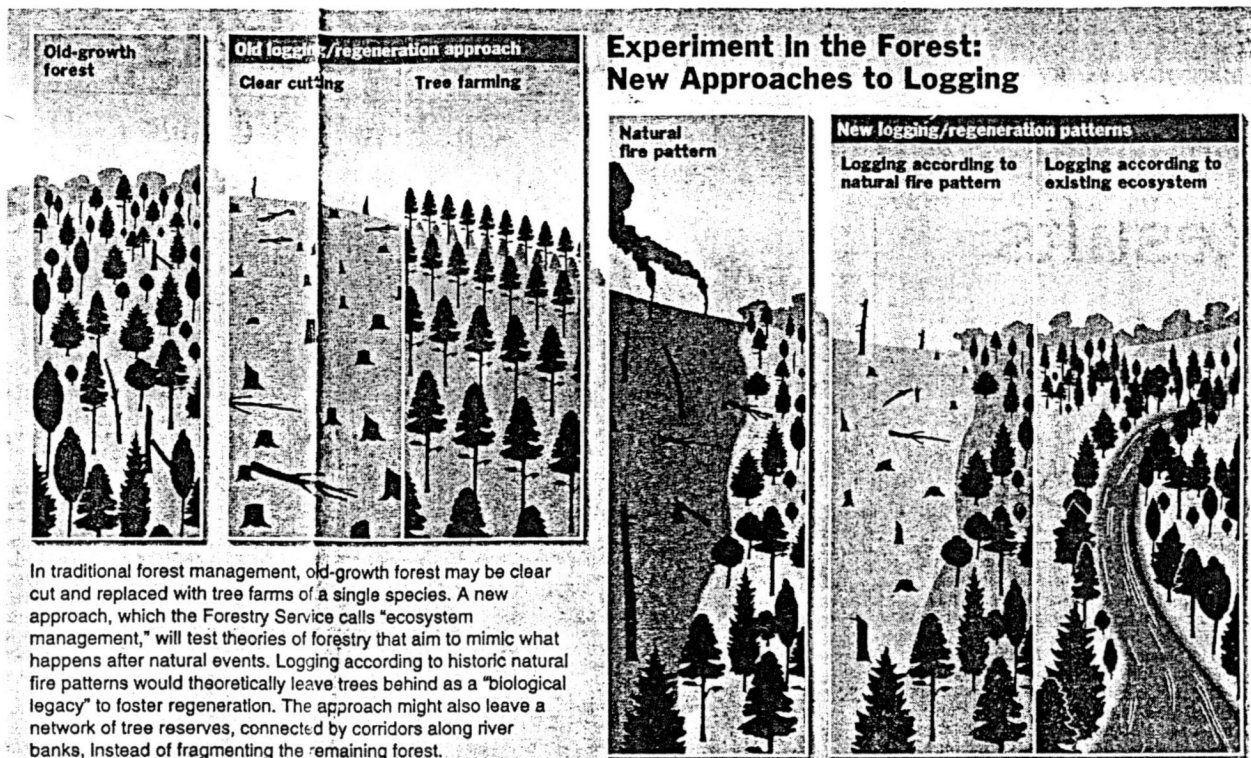
From that and other work, including analysis of the ecological patterns of recovery on the slopes of Mount St. Helens after its explosive volcanic eruption, the researchers concluded that such left-behind elements were "biological legacies" that helped new forest regenerate in a host of previously unsuspected ways. For instance, any remaining large, old trees on a burned site will provide habitat for huge numbers of predatory insects, which in turn suppress insects that might otherwise defoliate newly sprouted trees.

Applying Recent Discoveries

Biologists worldwide, meanwhile, were reassessing the role that the shape and size of habitats have on the species within them, particularly noting that if a larger landscape is fragmented into an archipelago of small island-like parcels, species could suffer previously unsuspected extinction pressures. That happens because isolated populations inbreed, or because predators normally restricted to forest edges suddenly have access to interior habitats.

In the Willamette National Forest in Oregon, foresters have designed a logging plan for the 19,000-acre watershed of Augusta Creek that Forest Service officials say could be a portent of things to come under "ecological management."

"In the past," said John Cissel of the Forest Service, "we probably would have taken a standard approach" to logging the site. That approach, he said, would have meant



In traditional forest management, old-growth forest may be clear cut and replaced with tree farms of a single species. A new approach, which the Forestry Service calls "ecosystem management," will test theories of forestry that aim to mimic what happens after natural events. Logging according to historic natural fire patterns would theoretically leave trees behind as a "biological legacy" to foster regeneration. The approach might also leave a network of tree reserves, connected by corridors along river banks, instead of fragmenting the remaining forest.

cutting and replanting perhaps 1 to 2 percent of the forest each year in a continual rotation, without much regard to the ecology of specific sites.

Instead, foresters plan to try to mimic the historical fire patterns in the region, with logging rotations of 200 or 300 years. To arrive at the pattern, scientists looked for evidence of fire-scarring, which can be determined by looking for aberrations in trees' growth rings.

"We found that on wetter, cooler north-facing basins, fires have been infrequent, but intense and large when they do occur," Mr. Cissel said. Thus logging in those areas will be infrequent but aggressive. In drier, hotter south-facing areas, he said, the fires have been "low intensity, burning mostly along the ground and then once in a while flaring up into the canopy and wiping out a pocket of trees." Logging in such areas will therefore be more frequent, but confined to small pockets.

In Michigan, the Forest Service has approved a plan to allow 173,000 acres in the Huron and Manistee National Forests to return to old growth. The forests were completely logged over near the turn of the century and are just now maturing.

In 1986, the Forest Service agreed in principle to protect that much land

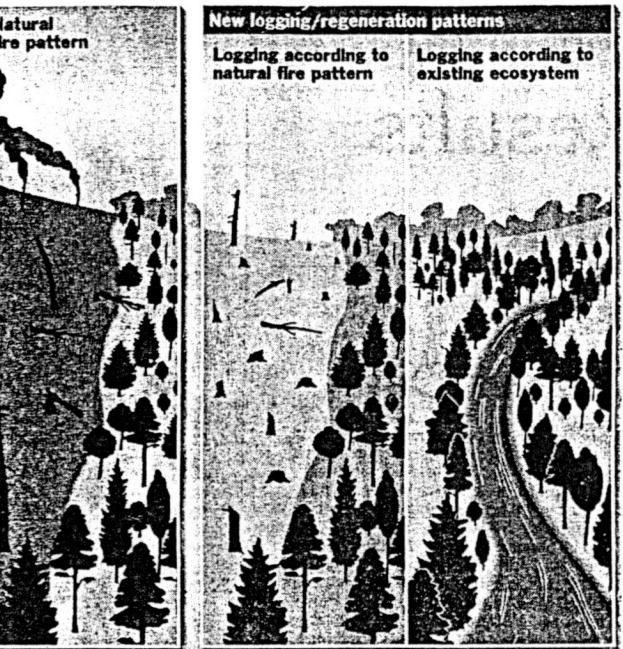
in response to a protest against its logging plans by environmentalists. But where in the past the agency might have sequestered parcels of land randomly, avoiding those most accessible and desirable to loggers, it instead studied the forests' ecosystems and designed a network of reserves, often connected by corridors of habitat along river banks.

The procedure may be a sign of how landscapes will be managed in other forests in the future, said Dr. Drew Barton, a visiting scholar in the biology department at the University of Michigan and a consultant to the Sierra Club who worked on the design. The result, he said, should be a more ecologically sound network of old-growth reserves while logging occurs elsewhere in the forests.

The approach, in all its variations, has its skeptics. Jeff DuBonis, director of the Association of Forest Service Employees for Environmental Ethics, a group often sharply critical of agency actions involving old-growth forests, called the announcement "smoke and mirrors." He suggested that the memorandum, although brief, listed so many exceptions to the clear-cutting ban that the directive was meaningless.

Jeff Olson, director of the Boile Center for Ecosystem Management

Experiment in the Forest: New Approaches to Logging



The New York Times, Illustration by Julie Shaver

A strategy seeks to mimic nature's way of renewing forests.

for the Wilderness Society in Washington, agreed. "On the one hand, it's an important development that they're talking about ecosystem management at all," he said. "I applaud their rhetoric. But we would have hoped to have seen some teeth in the directive."

Con Shallau, chief economist for the American Forest Resources Alliance, an industry trade group, suggested that logging costs could soar. Depending on how the directive is interpreted, it could halve timber supply from national forests, he said.

Among forestry scientists, Dr. William Atkinson, professor of forestry at Oregon State University, has been perhaps the most outspoken critic of some of the new approaches. He said his main objection was that too many of the new concepts were likely to be applied without experimentation on a smaller scale first.

"Instead of scientific forestry, we're going to have politically cor-

rect silviculture," he said.

Forest Service officials agree that they are experimenting as they go. "We're still fairly early along the learning curve, and we don't really have any cookbook methods for ecosystem management," said Mr. Cissel. "But forestry has always been a process of learning by doing, and continually adapting our practices. Ecosystems are incredibly complex, and if you feel you have to know everything and how it works before you try to change something you sense isn't working, you'll never be able to do anything at all."

It remains to be seen if the agency can apply the philosophy broadly, given a long history of political pressure from members of Congress from timber-dependent districts to maintain high logging levels. Mr. Robertson suggested in his announcement that after an initial dip of about 10 percent in timber yields, current high yields could be restored under the new program by cutting more selectively over a larger area.

But many environmentalists insist that current levels are not sustainable under any logging approach. And some highly placed agency staff acknowledge that for at least some forests improved ecological management could mean logging reductions.